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GOVERNMENT OF INDIA

MINISTRY OF INDUSTRY AND SUPPLY

REPORT

OF THE

IRON AND STEEL (Minor) PANEL

[*Price Rs. 1-8-0 or 2s. 3d.*]

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CHAPTER I

INTRODUCTORY

1. *Procedure for State Planning:* In the second Report of the Reconstruction Committee of the Council, after examining certain fundamental conditions affecting the planning of the industrial development of the country, the Government of India laid down the procedure by which it was proposed to prepare the First Five-Year Plan.

Among other things, it was stated that:

> " for the direction of planning, an Industrial Adviser to the Government of India has been appointed. He will be assisted by Deputy and Assistant Industrial Advisers. It is intended to set up a representative Industries Committee from among the foremost industrialists in India together with representatives of Provinces and States. This Committee will be consulted from time to time on questions of policy pertaining to industrial development. For the actual development work, panels consisting of one or two industrialists concerned with the particular industry or group of industries and assisted by experts and an officer from the Planning and Development Department, will be formed. Side by side with this, Provinces and States are also being advised to set up Industries Committees of their own so as to see that their special needs are not lost sight of. The recommendations of the Industrial Panels would be co-ordinated with those of the Provincial and States Committees before they are considered by the Government of India. This should not prevent Provinces from going ahead with the schemes of industrial development that may be ready. Such proposals will be examined by the Government of India on their merits and the point of view of any controls that may be required and any assistance that may be desired."

2. *Constitution of the Panel:* Having laid down the procedure as indicated above, the Government of India appointed various Panels, one of which was the Iron & Steel (Minor) Panel. Along with the letters of appointment issued to the Chairman and the members individually was also sent a general directive indicating the procedure to be followed and the lines on which the recommendations should be made.

3. The following terms of reference were particularly considered by the Panel in carrying out their investigations and in submitting this Report.

(i) The scope and extent of development including the type of products to be manufactured.

(ii) The location of the Industry.

(iii) In the case of industries to be developed other than under State ownership, capital required for such development, whether the whole of it is likely to be available by public investment and if not, extent to which Government assistance may be required.

(iv) The extent to which technical advice from abroad may be necessary.

(v) If the industry is to be under private ownership and management, what control if any, should be exercised by the Government.

(vi) The manner and the degree of co-operation with foreign firms considered necessary and desirable both as regards capital and management.

(vii) Should the Industry cater for the export market.

(viii) Should the Industry be developed as in Japan on the cottage industry basis and if so, to what extent.

(ix) The nature of the assistance required from Government in the form of protective duties, bounties, research grant, expert advice, etc.

4. As required in the directive, a note on the preliminary survey of the Iron & Steel Industries (Minor) prepared by Mr. K. C. Cooper, Deputy Industrial Adviser, who was also appointed Secretary of the Panel was also issued. The note contained for the information of the member factual information regarding the current organization, output and problems of such industries as hardware, hollow-ware, cutleryware, enamelware, surgical instruments, steel furniture and fittings, etc. Originally the planning and development of the surgical instruments industry was to be taken up by the Panel appointed for the development of the manufacture of scientific instruments, but later on, Government considered it desirable that the development of this industry should be handled by this Panel and therefore a sub-committee comprising Brigadier Woolfe, Mr. Rafi Butt and Dr. M. Venkatrao was formed to help the Panel on this subject.

5. On the conclusion of hostilities in Europe, when the Government of India decided to establish a temporary Tariff Board, with a view to safeguard the interests of new industries which were started during the pendency of the war, explanatory instructions on the general directive to Industrial Panels were issued by the Industrial Adviser to the Government of India as under:

> "One of the points on which Panels are expected to make recommendations is the nature of the assistance required from Government in the form of protective duties, bounties, research grants, etc. The question has been raised whether this item calls for a detailed investigation by panels on the degree of protection required and recommendations thereon. What is required from the Panel is only a broad indication that protection would or would not be required by an industry and not detailed recommendations which should be left to the Tariff Board to determine. It would, not, therefore, be necessary for Panels to investigate the costing of individual firms or to make any other elaborate investigation of the conditions of particular firms for the purpose but to base their recommendations on the broad facts of the industries with which they are concerned.
>
> The relative incidence of import duty on finished goods in comparison with the duty on raw materials from which they can be manufactured is another point on which panels have to make recommendations. So far as this point is concerned, Government merely expects that where the panels consider that the relative incidence of import duty on finished goods and their raw materials is hampering or likely to hamper Indian industry, they will recommend that the matter be examined by Government. The panels need not themselves examine and make precise recommendations on what rates of import duties might be levied."

6. *Proceedings of the Panel:* The Panel held its first meeting in Delhi on 6th July, 1945. Considering the very comprehensive nature of the inquiry to be carried out in respect of these different types of industries utilizing iron and steel as their basic material, it was thought advisable to form zonal sub-committees of the Panel in Bombay, Madras, Calcutta and Lahore in order to assist the Panel in the collection of as much factual information as might be of use in preparing this Report. Between the date of its first meeting and the time of the submission of the Report, altogether the Panel held 19 meetings. Members in each zone had their own meetings with representatives of the various industries, etc.

7. A comprehensive questionnaire was issued requesting full factual information from the various firms who were known to be interested in the manufacture of the products covered by the industries mentioned above, and their post-war plans. In addition to the questionnaire, the Directors of Industries, in the various Provinces were also requested to inform the Panel of any schemes pertaining to the development of the minor steel industries which they might have under consideration so that where possible the provincial planning of these industries might be co-ordinated with that of this Panel.

8. In course of their tours of the various zones the Panel discussed various problems pertaining to the industries within the scope of their inquiry with representatives of the following firms :—

1. M/s. National Iron & Steel Co. Ltd., Belur.
2. „ Guest, Keen, Williams, Ltd., Shalimar.
3. „ Metal Box Co. of India Ltd., Calcutta.
4. „ Indian Steel & Wire Products Ltd.
5. „ Powells Ltd., Bombay.
6. „ Godrej & Boyce Manufacturing Co. Ltd., Bombay.
7. „ Acme Manufacturing Co. Ltd., Bombay.
8. „ E. Eyre & Co. Ltd., Bombay.
9. „ Oriental Metal Pressing Works, Bombay.
10. „ Kamani Engineering Co. Ltd., Bombay.
11. „ Praga Tool Manufacturing Co. Ltd., Hyderabad.
12. „ Hyderabad Steel & Wire Products Ltd., Hyderabad.
13. „ Indian Rolling Mills, Negapatam.
14. „ Mysore Implements Factory, Bangalore.
15. „ Mysore Iron & Steel Works, Bhadravati.
16. „ Sri Jayachamarajendra Occupational Institute, Bangalore.

9. During the tour of South India, the Panel called on the Hon'ble Mr. V. V. Giri, M.L.A., Minister in-charge of Industries Department when they were given an opportunity to discuss the Madras Government's Industrial Policy particularly with reference to the development of small scale industries utilizing iron and steel as their basic raw material. As the Government of Madras had expressed a desire to be associated with our planning of the development of these industries in South India, all replies to the questionnaire issued to firms there, were accepted through the Director of Industries and during our visit there, opportunity was also taken to discuss their problems with Mr. S. Y. Krishnaswami, I.C.S., Additional Secretary to the Government of Madras in the Development Department.

10. Similarly at Bangalore, opportunity was taken to discuss the post-war schemes of the Government of Mysore with the Development Commissioner, the Director of Industries, Manager, Mysore Implements Factory and the Manager of the Mysore Iron & Steel Works at Bhadravati.

The Panel also visited the following factories :—

1. National Bolts, Nuts, & Rivets Co. Ltd.
2. Guest, Keen, Williams Ltd., Shalimar.
3. Metal Box Co. of India Ltd.
4. Powells Ltd., Bombay.
5. Godrej & Boyce Manufacturing Co. Ltd., Bombay.
6. Acme Manufacturing Co. Ltd., Bombay.
7. E. Eyre & Co. Ltd., Bombay.
8. Oriental Metal Pressing Works, Bombay.
9. Kamani Engineering Co. Ltd., Bombay.
10. Mysore Implements Factory, Bangalore.

11. Mysore Iron & Steel Works, Bhadravati.
12. Sri Jayachamarajendra Occupational Institute, Bangalore.

11. *The scope of the inquiry :* It may not be out of place to mention here that the word 'Minor' as affixed to this Panel is a misnomer. We feel, we should explain that the word 'Minor' in connection with this Panel was used to distinguish it from the Panel dealing with the basic production of steel which was designated 'Major'. The word minor relates to secondary as opposed to primary industry and is not to be taken as indicative of the size or scope of the industries concerned. Statistical information pertaining to the consumption of the products of these industries is scanty and of a nature which was of very little use in an enquiry of this nature. The one notable exception was that of the manufacture of wire, wire products and fasteners. For these steel products manufactured in this country, the Iron & Steel Control have compiled valuable statistical data. The statistical abstract of the Seaborne Trade of British India gives accurate information about the total import of these products in this country, but unfortunately not sufficiently detailed to provide sufficient data as to the import of the separate categories, commonly grouped under the heading "Hardware". Wire, wire products and fasteners are produced in large scale factories and reliable production figures are available, but there are other minor steel products which are produced on small or cottage scale for which it has not been so far possible to collect any statistical data. This particularly applies in the case of hollow-ware, hand-tools, enamelware, etc. and unfortunately, no proper classification has been made in the statistics of imports into this country and all such items have been classified as hardware. It has therefore been exceedingly difficult for us to fix the target which should be aimed at during the first five years of the Fifteen-Year Plan and the attempt we have made in this direction is based on the information and experience of those who are actively associated with the development of those industries or who have been importers of their products for many years in this country. As a result, the recommendations we have made, have of necessity been based largely on the incomplete data available and in consequence are limited.

12. In the circumstances, we would most strongly urge upon the Government to revise immediately the categories of imported goods, so that in future the statistical abstract of the Seaborne Trade of India may contain sufficiently detailed information to guide future planning.

13. *Personal:* Soon after we examined the materials placed before us, the witnesses who are interested in the manufacture of products covered by this inquiry and the factories which it was worthwhile for us to visit, in order to formulate our planning, we had the misfortune to lose our esteemed colleague, Mr. B. Viswanath, who died after a short illness towards the end of September 1946. Mr. Viswanath had spent a lifetime in the Steel Industry and was closely associated for many years with the development of the Mysore Iron & Steel Works. His vast knowledge of the industry acquired in this country and abroad and his enthusiasm for the development of secondary steel industries, was of considerable assistance to us in our work. He took a very active part in our discussions and was fully aware of the plan we had prepared before writing this Report. It was unfortunate that he was taken from amongst us before signing this Report, but we have no hesitation in saying that he fully endorsed the opinions we have expressed and the advice which we have tendered to the Government. In him, we lost an esteemed colleague and the Government of Mysore, a faithful servant, who we know has contributed much to the development of its Steel Industry.

CHAPTER II

BASIS OF OUR PLANNING

14. Mass production methods to capture internal and foreign markets have played a prominent part in the industrial growth of those nations, who occupy the premier positions in international trade and commerce. There is, as a result, a tendency to under-estimate the importance and significance of small scale enterprise in the productive organizations which have been built up in industrially advanced countries. It is certain that small scale industry has played a great part in the industrial growth of these countries. In the U.S.A.—the most outstanding example of industrial mass production—the small scale producer has not been ousted from the field of industry. Similarly, in Germany, small scale industry has existed side by side with mammoth plants producing the same commodity. Japan before the war developed most successfully cottage and small scale industries to a degree never before attempted. She linked up her large scale and small scale industries so that they both functioned—if not without friction—at any rate for the benefit of the industry and of the country.

15. In India, which has yet to go a long way in building up her industries, particularly the basic ones, the small scale and cottage scale industries have enjoyed a preponderant importance in the country's economic growth since the 'sixties of the last century, and even to-day from the point of view of giving employment, it is estimated that far more people are employed in small and cottage scale industries than the million and a half known to be employed in large scale ones. The Indian Industrial Commission which carried out the first official enquiry in 1916-18 on the development of industries in this country on systematic and scientific lines, has sufficiently stressed the need for developing our industries on (1) large scale, (2) small scale and (3) cottage scale. Methods were suggested as to the lines on which these should be developed and the amount of State assistance that could be given under the conditions then prevailing. The continuance of such an industrial development was dependent upon private enterprise of varying capacities finding scope to enter into business on any one of these scales. Even in the future economic structure wherein State planning is to play a more prominent role, development on these scales has to continue, if opportunities for increasing employment are to be provided in the various regions of the country, where opportunities are so scarce to-day, owing to the concentration of Industry in certain large towns and ports.

16. As the development of the basic and large scale industries is limited to certain regions by such restricting factors as the availability of raw materials, cheap power, water supply, transport and similar considerations, it is essential that small scale and cottage scale industries should be established all over the country to create conditions of better employment. Unless this is done even after the creation of the capital goods industry, which involves employment of comparatively less labour than the consumer goods industry, it is not unreasonable to expect a large volume of the Indian population to be left without work, unless small scale and cottage scale industries run *pari passu*, and are linked up with large scale enterprise as in Japan. So the first basis of our planning is to see that the development of the industries with which we are concerned is so planned as to give the large scale, the small scale and the cottage scale producers, sufficient scope to run their business on healthy lines and to ensure their growth in various regions, which would result in wider

diffusion of purchasing power and creation of large internal markets for the products of these industries.

17. The second point, which has received our careful consideration in the planning of the different processing industries utilizing iron and steel, is that we have borne in mind these important economic considerations which guided the Iron & Steel (Major) Panel. We refer to Chapter III of the Report, which reads as under:—

> " The Government of India have declared that they wish to bring about better balance between agriculture and industry. They have felt that there has been too much concentration of the principal industries in the large towns and in one or two Provinces. They are therefore of the opinion that as far as possible, new industrial establishments under the Fifteen-Year Plan should be regionalized when possible.
>
> " It must be admitted that this policy is sound when it can be carried out. In India, it is essential that every part of it should share in its general industrialization and some of the immense agricultural population should be absorbed in the industries and trained for technical work also. There are however certain circumstances inherent in some industries which made their regionalization difficult, if not impossible, unless several essential conditions are fulfilled. The iron and steel industry is one of these."

18. Having then described the conditions which made it impossible for them to implement Government's policy of regionalization as far as it applied to the basic steel industry, the Major Panel state that:

> " The iron and steel industry, it is needless to emphasize, does not mean only the production from the primary raw materials. It also includes the processing of iron and steel made by the primary producers into further products. The manufacture of agricultural implements including mechanical appliances is one of the most important of these from the national point of view. Mechanized units of reasonable sizes can be established in many parts of the country to manufacture the implements and appliances. Then again, there seems to be a future for the canning industry. Large quantities of cans and containers will be required for packing tea, coffee, preserved food, fish, vegetables, edible oils, ghee, butter, fats, tobacco, cigarettes, kerosene, petrol, lubricants and many other articles for human or industrial uses. Tinplates and sheets can be supplied from the major works for making these cans or containers in factories established in those localities where they are likely to be used. There are many other major and minor industries using iron and steel which can be established in different parts of the country. Among these may be mentioned structural engineering, shipbuilding, armaments, iron and steel castings, pipes and fittings, motor cars, railway rolling-stock fittings, bolts and nuts, rivets, screws, wire nails, safes, locks, padlocks, furniture, cutlery, haberdashery, etc. It is in this way that the iron and steel industry can be most economically regionalized. The establishment of such consuming industries as these is tied up as we have explained also with the expansion of the parent industry."

In the subsequent chapters, we have recommended the setting up of industries with which we are concerned, in as many regions of the country as possible.

19. The Iron & Steel (Major) Panel have explained at length in Chapter II of their Report, the causes which have contributed towards the low consumption of steel in this country, which remained stagnant for over 30 years in the region of a million tons per annum. Of the several probable reasons submitted for this low consumption, in their opinion, the high price of steel was one of the most important. They pointed out that the price structure based as it was,

before the war on the import price of foreign steel landed at major ports in India was responsible for the extra burden thrown on the Indian consumer, which varied by 50 to 100 per cent over the actual works costs. This was due to the fact that the cost of steamer freight, insurance and landing charges had to be computed in arriving at the landed price of foreign steel to which protective and other duties, with surcharges had to be added, in spite of the fact that steel was fabricated in the country and despatched by rail to consuming centres without having actually to incur the above expenditure.

20. Again the railway freight chargeable was from the nearest port to the destination upcountry and not from the works to the consuming centre. This additional burden on the consumer of steel in the distant markets was additionally responsible for the low consumption there. As the Industry was to pass in the post-war period from the "protective" to the "expansionist" stage, in their opinion, the price structure required complete modification and they stated "that prices are high and that they should be related no longer to foreign price but based on the works costs to which are added *inter alia,*

(a) a liberal percentage for the depreciation and usual overheads;

(b) a rate of profit which on the one hand would maintain the existing industry in a healthy and financially sound position and on the other would attract the amount of capital which would be required for this rapid development;

(c) all direct and indirect charges for sale and distribution which cannot be directly recovered from the consumer; and

(d) an adequate margin to stabilize prices at levels which will not necessitate frequent alterations.

21. In proposing to alter the price structure, the point which the Major Panel had prominently in view was to bring about a substantial reduction in price, eliminating such factors which would not enter in the make-up of the prices of the indigenous products. If the price of basic steel has to be brought down to a level at which the primary producers can and will market their products at a reasonable profit and at the same time encourage the consumers to make as much use of steel as they possibly can, then the same argument in our opinion also applies for the processing industries making use of basic steel as a primary raw material. If the capital resources of the country are to be utilized in initiating as many schemes as possible of industrial, agricultural and social development, then the products of industry must be made available at prices, which encourage their optimum consumption. We have therefore felt the necessity to take into account the fact that if basic steel is to be made available at the cheapest price to the producers engaged in the industries in the development of which we are concerned, then it is imperative that they should pass on the benefits arising out of the low cost of their raw material to the consumers of their products. We have therefore thought it advisable to make certain recommendations in the subsequent chapters dealing with these industries individually to see that their products are marketed at a fair selling price.

22. That India should be made self-sufficient in meeting the entire demand for the products of the various industries with which we are concerned, is another important basis of our planning. We have seen to it that in so doing, no monopolies are to be created or a combination of manufacturers, who by withholding supplies or by arbitrary fixation of high prices, deprive the consumers of steel products of the benefits of low cost basic steel. We have at the same time endeavoured to guard against conditions of over-production and the resultant cut-throat competition.

23. We have also considered the possibilities of development of the Industries with which we are concerned, on lines similar to those on which they were developed in Japan and the possibilities of exporting their products to markets east of Suez, to where Japanese products of similar nature are unlikely to be exported for some time to come. We have dealt with this matter fully in Chapter X, where we have pointed out some important aspects of pre-war Japanese industrial development. We have also stated the reason why India is in a position to develop her industries on similar lines, eliminating certain undesirable features which permeated Japanese industrial economy. We have shown the desirability and possibilities of exporting the products of the industries dealt with in this Report to markets in East Africa, Arabia, Persian Gulf, Burma, Malaya and countries in South East Asia. Having thus indicated briefly the basis of our planning, we take up in the subsequent chapters, the post-war development of the various industries with which we are concerned.

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CHAPTER III

PRIMARY HARDWARE : (a) WIRE ; (b) WIRE NAILS and OTHER WIRE PRODUCTS

24. Besides the manufacture of Agricultural Implements and Tinplates for the manufacture of containers to pack lubricants, kerosene oil and other products which can be conveniently distributed in tin cans and containers, the manufacture of Wire and Wire Products was the principal secondary industry, which was developed in Jamshedpur adjacent to the Steel Works, being the principal source of supply of the basic material.

25. In 1923, the first Indian Steel & Wire Products Limited, was formed under an arrangement with Messrs. Tata Iron & Steel Company Limited for the supply of rods required for the manufacutre of wire and wire products. The company applied in 1924 for the protection of wire and wire nails industry to the Indian Tariff Board who were then carrying out the first inquiry into the working of the steel industry. It was then held by the Board that:

> " The industry has satisfied the conditions laid down by the Fiscal Commission on the assumption that the wire rod required for the manufacture of wire would be produced in sufficient quantities by the Tata Iron & Steel Co., Ltd. Taking this view of the question, the Board recommended a duty of Rs. 60 per ton on wire and wire nails. No duties were recommended on barbed wire and stranded fencing wire, which were then not manufactured in the country. "

26. These recommendations were accepted by the Legislature and embodied in the Steel Industry (Protection) Act, 1924. In the course of the Tariff Board's Supplementary Inquiry in 1925, it became apparent that the Tata Iron & Steel Co., Ltd. were unable to manufacture the required wire rod. The protective duty on wire and wire rod was therefore withdrawn and the revenue duty of ten per cent *ad valorem* was re-imposed. It was also decided that the whole question of granting protection with particular reference to the condition laid down by the Fiscal Commission regarding the availability of basic material, should be reviewed by the Statutory Inquiry, which was to be held in the subsequent year. At this Inquiry, the Tata Iron & Steel Co., Ltd. stated that no wire rod had been delivered to the Indian Steel & Wire Products Ltd., and there was no chance of their putting up the rolling mill required for the purpose, for at least another three years. Meanwhile, the Indian Steel & Wire Products Limited, having defaulted payment of interest on the debentures, were served with notice of fore-closure by the chief debenture-holders, viz., the Bihar/Orissa Governments and the Tata Iron & Steel Co., Ltd., and in consequence, the company went into liquidation early in 1927.

27. The company was then sold by the Trustees of the Debenture-holders to Sardar (now) Sir Inder Singh who resumed production of wire and wire nails on 7th March, 1928. The raw materials used were imported rods. In February 1930, the company again approached the Tariff Board to grant them protection on the ground that, while the Tata Iron & Steel Co., Ltd., were still unable to produce wire rods, and had no intention of undertaking their production within a definite period, the Indian Steel & Wire Products Ltd., intended to install a rod mill for manufacturing wire rods from billets which the Tata Iron & Steel Co., Ltd, agreed to supply. This time the Tariff Board fully satisfied themselves

that the Tata Iron & Steel Co., Ltd. were in a position to supply the required billets and the Indian Steel & Wire Products Ltd. had completed arrangements to install a rod mill. Having thus satisfied themselves that the first condition laid down by the Fiscal Commission regarding the grant of protection was being fulfilled, they recommended a tariff duty of Rs. 45 per ton in 1931 on wire and wire nails. From that day onward the Indian Steel & Wire Products Limited went on gathering strength, and to-day the company is one of the most efficient, well-managed and up-to-date large scale enterprises in India. They met the urgent requirements of the Defence Services during the critical years of the war and fully justified their claim for the assistance which Government rendered to them in the shape of tariff duties.

28. When the last Tariff Board Inquiry was held in 1934, two other firms were established in the country manufacturing wire and wire products. These were Messrs. Devidas and Jethanand of Karachi and the Indian Hume Pipe Company of Bombay. Both these firms were using imported rods on which they obtained a rebate of the customs duty. The latter firm had taken up production of wire for use in the manufacture of Hume Pipes. The former firm had asked for a larger measure of protection and also suggested that a bounty should be given to them in order that they might develop the industry to meet the demand of the consumers in North-Western India, who were fed by the port of Karachi.

2 . The Tariff Board refused the request because the company's conversion cost from rod to nails was Rs. 120 per ton and it compared unfavourably with the conversion cost of the Indian Steel & Wire Products Limited which was Rs. 82 per ton. The Board considered that the grant of bounty was out of question, because even with duty-free imported rods, the firm's costs were higher and they would not be in a position to compete with the Indian Steel & Wire Products Limited, even in markets where they had a very high advantage on railway freight charges. With a protective duty which they had suggested, the Board felt the company would be able to compete with foreign imports only after drastically reducing their costs.

30. In the circumstances, the only assistance which the Tariff Board could afford was to allow them to import 1,500 tons of rods per annum duty-free from abroad for a period of two years. The Karachi firm's suggestion of setting up a rod mill was not approved by the Tariff Board on the ground that the market to be supplied required at the most about 4,000 tons of wire and wire nails per annum, whereas a really economical rod mill would require to roll many times more than that quantity.

31, The Tariff Board also turned down the claim of this firm for protection on the manufacture of wood screws. The firm's capacity was calculated to be one thousand gross per day which the firm submitted could be increased to five thousand gross, which would be equivalent to 670 tons per annum whereas the consumption of wood screws in India during the two years preceding the Inquiry was approximately 1,748 tons per annum. Their cost of production was 6 as. 6 ps. per gross inch whereas the continental screws were sold at 2 as. 7 ps. per gross inch and Japanese screws were sold at 1 anna 6 pies per gross inch. As the cost of wire was only 1 anna 8 pies out of the total cost of 6 annas 6 pies, in the opinion of the Tariff Board even a drastic reduction in the cost of wire would not appreciably bridge the gap in the price of Indian and foreign screws, and therefore protection was not justified.

32. When the last Inquiry for protection to the Iron and Steel Industry was carried out by the Indian Tariff Board in 1933-34, it was known that there were some small factories in and around Calcutta manufacturing nails from imported wire. Requests were received from two such firms for protection and

the Board felt that they did not fulfil the fundamental condition laid down by the Fiscal Commission for grant of protection, owing to their dependence upon imported raw material, and therefore protection could not justifiably be granted. With the outbreak of the war, the necessity of obtaining all supplies of wire and wire nails from any sources gave an impetus to these firms and others which were started in different parts of the country on a small scale. Besides these small firms, one more large scale enterprise came on the scene in the National Screw & Wire Products Ltd. at Belur near Calcutta. The vast majority of these small firms were not properly organized and had no up-to-date equipment with the result that their cost of production was exorbitant.

33. *Current capacity and output:* The Indian Steel & Wire Products Ltd. manufacture the following products :—

(1) Rods below half inch diameter.
(2) Hard Bright Wire.
(3) Annealed Wire.
(4) Galvanized Wire.
(5) Barbed Wire.
(6) Wire Nails.
(7) Nuts, Bolts and Rivets.

During the war, the entire output of the company was controlled and its production was directed mainly to the Defence Services. Besides the above the company manufactures:

(1) Telegraph and telephone wire.
(2) Signal wire.
(3) Bead wire (for tyres).
(4) High tensils wire.
(5) Spring steel wire.
(6) Strand wire.

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Their estimated monthly capacity of the principal products is as under :—

(1) Bars and wire rods 5,000 tons per mensem.
(2) Hard bright and annealed wire 3,600 tons per mensem.
(3) Galvanized and telegraph wire 600 tons per mensem.
(4) Barbed wire 500 tons per mensem.
(5) Wire nails 1,200 tons per mensem.
(6) Nuts, bolts and rivets 75 tons per mensem.

The above is the maximum capacity of wire and wire nails that can be manufactured individually throughout the month, but the aggregate productive capacity when assorted products are rolled is about 36,000 tons of wire and wire products.

34. The company consumed approximately 50,000 to 55,000 tons of billets before the war. Owing to restricted output of semi-finished steel due to lack of coal and transport facilities during the last four years, their capacity was not fully utilized.

35. The National Screw & Wire Products Ltd. produce annealed and hard bright wire of 16 and thicker gauges and nails in sizes of 1 to 6 inches.

Their estimated capacity is 1,800 tons of wire and 840 tons of wire nails per annum. The capacity of small producers of wire and wire nails, who came on the scene during the war is given as under :—

TABLE No. 1.

Name of firms.	Products.	Approximate monthly capacity.
Wire		(In tons)
1. Calcutta Wire Nails Co., Ltd., Calcutta ...	Wire, annealed and hard bright 8 to 16 g.	140
2. W. Leslie & Co., Jaipur ...	2 g. to 12 g. wire	98
3. W. Leslie & Co., Aligarh ...	2 g. to 12 g. wire	45
4. Benares Steel Rolling Mills, Benares Cantt.	10 g., 12 g. and 14 g. annealed and hard bright	7
5. Lilooah Steel & Wire Co., Lilooah ...	ditto	39
6. Bhartia Steel & Engineering Co., Ltd., Calcutta ...	ditto	12
7. Wire Nail Ltd., Bombay ...	10 g., 12 g. and 14 g. wire	78
8. Hyderabad Wire Products Co., Hyderabad	10 g., 12, g. and 14 g. annealed and hard bright wire	156
9. Hindustan Wire Products Co., Benares ...	Wire 14 g. and thicker	50
		625
Wire Nails		
10. Padam Engg. Works, Bombay ...	Wire Nails	9
11. Wire Nail Mfg. Co., Bombay ...	Wire Nails ¾″ to 4″	26
12. India Metal Products, Bombay ...	Wire Nails ½″ to 8″	35
13. Bharat Wire Netting & Metal Products, Karachi ...	Wire Nails ½″ to 1″	1
14. Wire Nails Ltd., Bombay ...	Wire Nails	4
15. National Insulated Cable Co. of India Ltd. Calcutta. (Works at Mahgaon, C.P.)	Nails	20
16. Kushiram Tarachand, Karachi ...	Nails	20
17. Small Industries, Manapuram, Trichinopoly	Nails	10
		125

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Therefore the total estimated capacity of the above producers is 7,500 tons of wire and 1,500 tons of wire nails per annum.

36. In Table No. 2 below, we give the actual total manufacture of wire and wire products in British India during the last six years from the statistical information collected by the Steel Commissioner in India. The production was not up to capacity for reasons explained below :

TABLE No. 2.

Total production of wire and wire products, 1939-1944 (in tons).

Description	1939	1940	1941	1942	1943	1944
Indian Steel & Wire Products Ltd.:						
(a) Wire (Barbed) ...	897	2,132	4,793	5,805	5,428	267
(b) Wire (Tele.) ...	1,013	1,870	3,528	7,019	3,297	6,929
(c) Wire (Misc.) ...	3,444	4,142	5,850	6,117	6,128	6,015
(d) Wire Nails ...	10,895	12,129	12,492	11,587	11,511	8,731
Other Re-rolling Mills:						
Wire & Wire Products	N.A.	444	545	308	528	1,194
Total ...	16,249	20,717	27,208	30,836	26,892	23,136

37. It will be seen that the current capacity of Indian Steel & Wire Products is 60,000 tons of rods of under ½" of which they utilize about 40,000 to 42,000 tons in the manufacture of wire, and wire nails and fasteners because the estimated capacity of the manufacture of wire and wire nails is about 36,000 tons and that of fasteners is about 1,200 tons per annum. So with an approximate loss of 10 per cent in production, the firm would consume about 40,000 to 42,000 tons of wire rods for this purpose. The productive capacity of the National Screw & Wire Products Ltd. is about 1,800 tons of wire and about 850 tons of nails. The estimated capacity of other small producers is about 7,500 tons of wire and 1,620 tons of wire nails per annum. Therefore, the total annual capacity is:

Wire	29,300 tons
Wire Nails	16,480 ,,
Total ...	45,780 tons

38. Against this, the *actual* output during the five years 1940-45 was on an average 25,459 tons as will be seen from Table 2 above. This lag between actual production and capacity was attributed to two reasons. First, the lack of coal and transport facilities. Second, the inability of the small manufacturer to run their mills efficiently owing to the very improvised nature of their equipment. This deficit in indigenous production was made good by an average import of about 31,000 tons of wire and wire products.

39. In Table No. 3, we also give the imports of wire and wire products excluding fencing wire during the quinquennium 1935-40.

TABLE No. 3.

Import of Wire and Wire Products (excluding "fencing wire") 1935 to 1940 (in tons)

Description	1935–36	1936–37	1937–38	1938–39	1939–40
Wire Nails (Protected) ...	15,274	8,025	6,234	4,944	5,591
Wire Rope (Black)	1,892	2,423	3,104	2,347	2,331
Wire Rope (Galv.)	1,126	940	2,347	804	1,011
Wire other than fencing wire ...	9,583	8,623	8,401	9,186	10,057
Government Imports protected ...	57	30	69	194	159
Government Imports not protected	945	11	633	81	147
Total ...	27,977	20,052	20,788	17,556	19,296

Source: "Statistical Abstract" of the sea-borne Trade of *British India.*

40. Therefore, the average import of wire and wire nails excluding fencing wire and wire rods during the quinquennium 1935-40 was approximately 21,000 tons as stated above. This coupled with the indigenous production of about 25,000 tons per annum indicates an approximate consumption in this country before the war of about 45,000 tons per annum.

41. *Estimate of the future demand for steel and the target:* To arrive at a reliable estimate of the future demand for wire and wire products, we must take into account the new factors which are likely to come into prominence with the Fifteen-Year Plan that is now being worked out rather than base our estimates on conditions prevailing before and during the war period. First and foremost, we must take into account the post-war development schemes of the Central and Provincial Governments. Secondly, the requirements of the post-war armed forces and lastly, the possibility of export. The various government departments—Central and Provincial have already indicated in broad outlines the plans which they are prepared to put through during a period of 15 to 20 years, to raise the economic and social standard of the masses in this country. They have also indicated the line of action to be taken during the first five years. The Major Steel Panel formally addressed the principal departments of the Government of India and the Provincial Governments and some of the major Indian States, to ascertain what in their opinion should be the consumption of steel in their areas and whether they were interested in the production of steel and steel products in the area within their jurisdiction. We too asked the Directors of Industries in the various provinces and Indian States to indicate if they were interested in the steel processing industries. As most of the schemes exist only in broad outline, only a general idea of the nature and extent of the demands is indicated.

42. The Major Steel Panel have considered these schemes at length in their first Report in Chapter I, paragraphs 15 to 42 and we feel that a similar attempt on our part would merely involve duplication of work.

> "Taking into account all the circumstances and looking seven years or so ahead, we are satisfied that the Government's proposed target of increasing the output of steel by about a million and a half tons per annum is both feasible, and desirable in the national interest."

So, in their opinion, there would be a demand in the country for basic iron and steel and their products which would justify the expansion of the industry by two and a half times.

43. In fixing the target for the processing industries based on steel, we are throughout faced with a very difficult problem in assessing the potential demand for such steel products as hardware, including wire and wire products, hollow-ware, enamelware, cutleryware, etc. Our difficulties are considerably enhanced by the fact that none of the Planning Departments of the Government have been able to state how much of these products would be utilized in their post-war development schemes. However, when the proposed nation-wide building programme is put into execution, a very large quantity of hardware will be required. In buildings made of cement and concrete, consumption of enormous quantities of wire will be necessary. When the Agricultural Department schemes are put into operation, thousands of miles of fencing wire will be required for orchards, fruit gardens, dairy and poultry farms, etc. Similarly, a large quantity of wire for Telephone and Telegraph will be needed for renewal purposes and for the extension of services to keep pace with the ever increasing demand. None of the departments are able to state, and for good reasons, what their requirements of hardware will be.

44. In paragraph 37 above, we have shown the total productive capacity of all the manufacturers of wire and wire products in the country to-day is about 46,000 tons. We have also shown in paragraph 40 how we arrived at pre-war consumption of wire and wire products of about 45,000 tons per annum. During the last six years, more than 60 per cent of this pre-war consumption was diverted into war channels, with the result that a shortage was created in the civilian consumption of these products which will have to be met during the post-war period. We estimate the back-log of demand at about 216,000 tons of wire and wire products and if this is to be met during the first five years of the Plan, then the total consumption in the country would increase by another 43,000 tons making a total of 88,000 tons. A check on this figure is that when the consumption of basic steel in the country was in the region of a million tons for many years before the war, the consumption of wire and wire products was about 45,000 tons. So, when the consumption of basic steel is expected to be three million tons, then the consumption of wire and wire products may be in the neighbourhood of 110,000 tons.

45. There is some danger in building a target of production on such a basis, for the back-log of demand may not materialize to the extent expected. We, therefore, agree with the other Panel that "50 per cent to 60 per cent of the demand may arise during the first five years of the Plan ". Similarly, it would be dangerous to assume that the consumption of wire and wire products will expand in exactly the same rates as the basic steel. When steel production is raised to 3,000,000 tons, the uses to which it will be put will be many and varied. Undoubtedly the use of wire and wire products will be on a larger scale, but it most certainly will not be as much as for as varied purposes as that of the basic steel. We, therefore, feel safe in planning for 50 per cent to 60 per cent of the back-log of demand arising during the first five years of the Plan. Considering that increased use of wire and wire products will be made in putting through the Government sponsored schemes, heavy post-war building programme for industrial and other requirements, a production target of 100,000 to 110,000 tons per annum would not be an overestimate.

46. We would suggest that our recommendations may be put into execution by stages so that in the event of the local consumption not reaching the level it is expected to do, the setting up of further units may be delayed. If immediate steps are taken to study the export market and arrangements are made for the surplus production being marketed there, then we feel that the development of the industry on the lines suggested need not be delayed. We therefore propose that the target for the production of wire and wire products during the first five years of the Plan should be fixed at 100,000 to 110,000 tons at the end of the period as against the current output of approximately 45,000 tons.

47. *Regionalization and location of new plants :* We have already indicated in paragraphs 17 to 21 in Chapter II dealing with the basis of our planning how we propose to synchronize our planning with that of the basic steel industry so as to give expression to the Government's declared policy of regionalizing industries as far as possible. We have also expressed our views regarding the desirability of so building our industrial structure as to permit small scale units to work *pari passu* with the large scale ones, to enable the growth of the processing steel industries in various regions, which would bring about wider diffusion of purchasing power, create better opportunity for industrial employment in regions where they do not exist and thus help to raise the standard of living throughout the country.

48. Bearing in mind these basis of our planning, we would like to review some of the important post-war projects which have been placed before us in reply to the questionnaire issued to them or in course of evidence given before

the Panel. After reviewing these, we propose to submit our own recommendations.

49. First, we propose to take up the extension programme and new projects of the existing units in the industry. The Indian Steel & Wire Products Ltd., whose current capacity is already indicated in paragraphs 33 to 37 above and their actual output in Table No. 2, propose not only to increase the present capacity of their plant, but also to manufacture other wire products, the manufacture of which so far has not been taken up in the country. They later include umbrella ribs, wire mesh, wire ropes, springs, wire netting, wire gauze and wire fencing. The firm plan to install a rolling mill plant with a capacity of 175 tons of wire rods per day of 8 hours. If worked full three shifts and throughout the year this would mean a production of about 175,000 to 180,000 tons of wire rods and/or M.S. Bars below ½″ per annum. To achieve our target of wire and wire products at the end of five years after the introduction of the plant, the quantity of wire rods required would be approximately 130,000 tons. Of the increased capacity of their rod mill, the firm plan to manufacture approximately 75,000 tons of wire rods and the balance for the manufacture of reinforcing rounds etc. They propose to raise the production of wire nails from 14,000 tons to 25,000 tons and of galvanized wire and hard bright annealed wire to 7,000 tons and 14,000 tons respectively. In addition they plan to make 4,000 tons of barbed wire and 3,000 tons of special wire.

50. The second proposal was from the National Screw & Wire Products Ltd. This company plan to expand their capacity from 1,800 tons of wire and 850 tons of nails to 2,500 tons of wire and 1,500 tons of nails. They also plan to erect a small plant for the manufacture of umbrella ribs.

51. The third proposal was from Indian Steel Rolling Mills at Negapatam. These rolling mills were manufacturing bars and rods before the war from imported billets and are now manufacturing bars and baling hoops rolled from billets supplied by Messrs. Tata Iron & Steel Co. Ltd. who have also taken over the distribution of their products. The present capacity of their rolling mills is 30,000 tons per annum which, in the opinion of the Managing Director, Mr. C. Rajam, could be raised to 60,000 tons by carrying out certain alterations in the existing furnaces. This opinion was based on expert advice from abroad. Even though their current rated capacity is 30,000 tons, the annual output was in the neighbourhood of 18,000 tons, but this was mainly due to lack of coal and sufficient quantity of billets. They propose to roll bars from 3/16″ to 2¼″ which would enable them to meet the full requirements of the province. Of these 60,000 tons of bars, they propose to roll 20,000 to 25,000 tons into rods, and then to manufacture therefrom wire nails, chains, bolts, nuts, rivets, wood screws and umbrella ribs. In their opinion, they were ideally situated to expand their re-rolling mills by adding small units for the processing of these products and they tendered four reasons in support.

52. The first was the availability of cheap labour. The second was the availability of power. The third was that they already had extensive workshop buildings which were lying vacant and so the installation of new units would not involve any expenditure on construction of buildings. The fourth reason was that Negapatam was a cheap port, lighterage and other charges being lower than elsewhere in India. The company were of the opinion that after meeting the requirements of the markets in South India, they would be in a position to export to other parts of India.

53. They propose to manufacture the following quantities of wire and wire products :—

Wire Nails	... ...	12,000 tons
Wire	... ...	7,000 „
Chains	... ...	2,000 „
Total	...	21,000 tons

They also intend to manufacture umbrella ribs, steel door and window frames and B.R.C. fabric from the balance quantity of rods that would be available when the peak production was achieved. They were in negotiation with firms in U.K. and America and were confident that the required plant could be set up within a year of the completion of their negotiations.

54. The fourth proposal was from the Hyderabad Steel & Wire Products Ltd., who sent their Director, Nawab Ahsenyarjung to meet the Panel in Madras to discuss their scheme. The company was formed during the war to manufacture wire products and fasteners including wood screws, but machinery was not available from the U.K. or U.S.A. With the resumption of exports of machinery from abroad, the company hoped shortly to be in a position to manufacture the following:—

Wire Nails	... ...	225 tons
Wood Screws	...	75 „
Bolts, Nuts and Rivets		675 „
Total	...	975 tons

55. They also placed before us their plans for considerable expansion of their original proposals. These include the installation of:—

(1) Electric scrap melting furnaces, both for ferrous and non-ferrous scrap, with a melting capacity of 3,000 lbs. per hour for ferrous and 500 lbs. per hour for non-ferrous scrap.

(2) A complete Merchant rolling mill with a capacity of 2¾ tons per hour for the production of the following items:—

Strips	... ...	2″ to 8″ wide.
Rounds and Square Rods		⅜″ to 1½″
Wire Rods	... ...	3/16″ to ¼″
Flats	... ...	⅜″ to 2½″
Hoops	... ...	¾″ to 1¼″ (19 G.)

(3) A complete set of automatic wire drawing machines for drawing wires from 5 to 30 gauge, from both ferrous and non-ferrous rods with annealing furnaces, etc., complete—capacity about 5 tons a day.

(4) Automatic machines for the production of wire nails, wood screws, bolts and nuts and rivets—capacity 12 tons a day.

On completion of their plan, in their opinion, they would be in a position to produce the following:—

		Tons per annum
(i)	Production of steel from steel scrap ...	6,000
(ii)	Rolling Mill Ingots	5,500
(iii)	Wire Drawing	1,500
(iv)	Wire Nails	855
(v)	Wood Screws	300
(vi)	Bolts, Nuts and Rivets	2,700
(vii)	Hoops for cotton bales	900
(viii)	Steel castings	600
(ix)	Non-ferrous castings	300

56. Before the Planning and Development Department came into being and long before this inquiry was taken up, the firm had obtained licences to import machinery of a total value of about Rs. 25,74,000 of which the two important items were, an electric melting and refining Herout Arc Furnace costing Rs. 2,20,000 and one Morgan Merchant Mill costing Rs. 16,82,000.

57. The last scheme which was put before us was from the Mysore Iron & Steel Works of Bhadravati. They propose to manufacture 20,000 tons of wire and wire products per annum of the following:—

Wire	10,000 tons
Wire Nails	3,000 „
Bolts, Nuts, Rivets and Washers	6,000 „
Wood Screws ...	1,000 „

They have already installed a rod mill to produce rods from ¼" to 3/16" of a capacity of 40 tons per shift of 8 hours. No arrangements have so far been made to purchase the plant and equipment for the manufacture of wire nails, fasteners and wood screws. In a subsequent letter dated 30th May, 1946, they expressed the desire to limit their scheme in the first instance to a production of only 10,000 tons per annum with provision to increase it to 20,000 tons in the event of demand from South India materializing to that extent.

58. In explanation of their eagerness to take up the manufacture of these products even though they were a primary producer, they submitted that their position as such was peculiar that " in the absence of a coke oven furnace and the consequent dependence on wood and charcoal for smelting, we had necessarily a small unit with the handicap we have to dump the markets with as much proportion of our steel as possible, in finished form and as special products. It is from this point of view that we are proposing to install the wire and wire products plant. In our opinion, it is a natural extension that would help to balance our operations. In view of the technical experience, auxiliary service and administrative organization available at Bhadravati, the manufacture would be quite efficient and economical. Equal facilities and advantages for manufacture are not available anywhere else in South India at present.

59. In further support of their argument, they stated that Bhadravati was favourably situated for distribution to consuming centres in South India. In their opinion, there was ample scope for them to carry on this activity even with plants in other parts of South India as they felt that the demand in the post-war period would be considerable.

60. Having briefly described the expansion scheme of the present manufacturers of wire and wire products and those who propose to take up their

production in the near future, we now submit our own recommendations as to how the target of 110,000 tons is to be achieved within the first five-year period of the Fifteen Year Plan. For this purpose, we have summarized the development plans put before us and the position is revealed as under :—

TABLE No. 4.

Expansion proposals in tons per annum.

	Wire	Wire Nails	Sundries including chains, umbrella ribs, wire-netting, wire-mesh, B.R.C. fabric etc.
1. Indian Steel & Wire Products Ltd.	28,000	25,000	20,000
2. National Screw & Wire Products Ltd.	2,500	1,500	...
3. Indian Rolling Mills Ltd. ...	10,000	5,000	5,000
4. Hyderabad Steel & Wire Products Ltd. ...	1,500	855	...
5. Mysore Iron & Steel Works ...	10,000	3,000	...
Total ...	52,000	35,355	25,000

(Products other than those indicated above, which Messrs. The National Screw & Wire Products Ltd., The Hyderabad Steel & Wire Products Ltd. and the Mysore Iron & Steel Works propose to manufacture, have not been taken into account).

61. On the basis of the foregoing figures, it would appear that plans exist within the industry to achieve a production target which we have recommended. Nevertheless the majority of these schemes exist only on paper. No adequate data was available to the Panel to indicate whether they were feasible or not and if on closer investigation, it is decided that some of these schemes should not proceed, then, we would make the following recommendations for the development of the industry by stages.

62. It has not been possible for this Panel to obtain any expert advice within this country as to what would be a minimum economic plant to produce wire and wire products. We requested the Government of India in the then Planning and Development Department to obtain the required information from abroad through a firm of consulting engineers, but unfortunately, adequate information has not been received at the time of writing this Report. In the course of our inquiry, we were informed that units capable of manufacturing 5,000 tons per annum in the first instance which could be raised to 10,000 tons later on, could manufacture these products at a reasonable cost. On the other hand, we are informed by others including our colleague, Sirdar Ajaib Singh who had the advantage of discussing this matter with experts in the United States, that even a unit of the type of the Indian Steel & Wire Products Ltd. cannot be described as a most economical unit. We understand that in the United States, a plant has been installed of a productive capacity hitherto unknown. Exigencies of war might have necessitated bringing under one roof a large number of machines resulting in savings of overheads, etc., but it is still a fact that in Germany and Japan, there existed comparatively small economic units ecreted at low capital costs.

63. We have asked the Government to ascertain from the experts abroad, details of the difference in the conversion costs of wire and wire products by small units as compared with large units. Should the difference be negligible or such as would justify processing of wire rods into wire and wire nails in small units taking into account the difference in transport charges, five units of a minimum capacity of 5,000 tons which could be raised to 10,000 tons in the event of the demand justifying it, may be erected, one each in the Madras and Bombay Presidencies, one in the Punjab and one each in Hyderabad and Mysore States. In the event of the expert opinion deciding on the installation of only one unit to take up the production of 25,000 tons of wire and wire products, we recommend that such a unit should be installed at a site in the Madras Presidency recommended below.

64. Our reasons for making the above recommendations are as under: In the event of expert advice deciding on the construction of one unit, the Madras Presidency offers more advantages than any other part of India. The large scale plant of the Indian Steel & Wire Products Ltd., installed at Jamshedpur, is in a position to cater for all markets in Northern India, from the borders of Assam to those on the Frontier. Being only 150 miles away from the port of Calcutta, the products of this factory can also be exported. Another factory in South India, situated on the broad guage system of railways midway between the port of Negapatam, where already an efficient re-rolling mill is in existence and Bhadravati where are situated the Mysore Iron & Steel Works can look after the markets not only in the Southern Presidency and in the important States like Hyderabad, Mysore, Travancore, Cochin which lie on the borders of this Presidency, but the products of this works can be exported to markets fed by the major ports of Bombay and Karachi, and by those in the Kathiawar State from where materials can be despatched even into Central India.

65. The second advantage of having a works situated in South India is that it would be unnecessary to install an expensive re-rolling mill to produce wire rods as these could be purchased from the re-rolling mill at Negapatam and from the Mysore Iron & Steel Works. Such a plant would only require wire drawing units with auxiliary equipment for annealing, galvanizing, etc., and machines for the manufacture of wire nails. The use of the existing re-rolling capacity in South India for this purpose would result in a considerable saving in capital cost. It would enable the Madras Government to implement its industrial policy, which the Hon'ble Mr. V. V. Giri, Minister incharge of Industries Department and the Development Secretary, Mr. S. Y. Krishnaswami, I.C.S. had explained to this Panel. It would enable the Mysore Iron & Steel Works to find a ready market for at least 12,000 to 15,000 tons of wire rods which will be manufactured on the 10" mill now under construction. The Indian Rolling Mills at Negapatam may likewise find a constant market for about 10,000 to 12,000 tons.

66. As has been pointed out before, the Mysore Iron & Steel Works in their representation stated that "in the absence of a coke oven furnace with the consequent dependence on wood and charcoal for smelting, we had necessarily a small unit with the handicap of higher costs on raw steel as compared to other primary producers. Hence to reduce the handicaps, we have to dump the markets with as much production of ore steel as possible and its finished form as special products. It is from this point of view that we are proposing to install a wire and wire products plant. On a matter of principle, we are adverse to the primary producers of steel taking up the production of finished products which correctly fall within the ambit of secondary producers. The proper function of the basic steel industry is to supply material for processing finished products

in the manufacture of which the secondary producers specialize. Any attempt on their part to encroach upon the functions of the secondary producers would negative the purpose underlying the Government's policy of regionalization of the industry so as to balance industrial and agricultural economy by spreading industries in regions where they do not exist and where their introduction—other conditions being favourable—would increase the purchasing power of the masses and consequently their material well-being. The fact of their having to produce basic steel at uncompetitive rates as compared to other primary producers in the country cannot be put up as a justifiable cause by the Mysore Iron & Steel Works, to embark on the manufacture of products, which could be produced in normal times from indigenous billets or wire rods, obtainable at lower prices than those from the Bhadravati Works. For these reasons, we are of the opinion that no plant for the manufacture of wire and wire products be installed at Bhadravati. In the event of one works having to be installed in South India, the Mysore Iron & Steel Works should be allowed to supply 60 per cent of wire rods required at the proposed plant and they should also be allowed to participate in the share capital required for this plant.

67. The Indian Rolling Mills Ltd. at Negapatam might likewise be offered a share of the capital and the balance might be offered to investors in South India. The matter may however be left entirely to the Government of Madras as to how the capital, excluding that to be subscribed by the Mysore Government, should be raised. They had expressed desire that in establishing industries in South India of the type with which we are concerned, the capital should be raised from investors in that Presidency. We consider this to be a reasonable demand.

68. As envisaged in paragraph 63 if five plants are required, our views are as herein. The plant in the Madras Presidency should be installed at Negapatam in preference to any other place in that Presidency. The four important reasons for this have already been mentioned, viz. (1) availability of skilled labour; (2) ready-made factory facilities; (3) cheap lighterage and port dues and (4) cheap power.

69. An alternative site might be either Madras proper or any destination on the broad gauge line of the M. & S. M. Railway within a radius of about 120 miles or so from this major port in South India. The first reason for recommending an alternative site in the Southern Presidency is to enable the Madras Government to put into execution their industrial policy. The Madras Government desire that as far as possible industries should be so regionalized as to give scope for maximum industrial employment in as many districts of the province as possible.

70. The second reason is to enable utilization of transport facilities provided by the two railways systems of which Madras is an important centre, and also by the port of Madras from where materials could be despatched to the east and the west coasts of the peninsula and to markets abroad.

71. We have recommended the installation of a plant in Bombay which, in our opinion, should be located at a site in greater Bombay or within easy reach of that port. No other site in that Presidency offers so many economic advantages. They are :—

(1) Adequate skilled industrial labour; (2) cheap electric power from the three hydro-electric companies and (3) importance of rail and port facilities. The factory in Bombay will have to depend for its basic material either on the Indian Steel & Wire Products Ltd. at Jamshedpur or the Ordnance Factory at Ishapur or the Mysore Iron & Steel Works at Bhadravati. To bring the required basic material from any of these three sources, it will be necessary to

utilize railway transport upto 150 miles to bring them to the nearest port for transport by sea to Bombay. If the plant was located outside greater Bombay it would again involve further inland transport charges on the raw materials and also on the finished products.

72. The third plant to be installed should be in the Punjab between Shaharanpur and Lahore. The suggested site would be able to look after the requirements of all the territories within the Delhi Province, Punjab, North-Western Frontier Province, such portions of Rajputana which are fed by the railway system linked with the N.W.R. at various destinations and markets in Northern Sind and Baluchistan. The Punjab has ample skilled labour in the metal industries and there should be no difficulty in training them in wire drawing and wire processing. Cheap power is available from the various hydro-electric systems which cover the whole of the province. The basic raw material will have to be supplied from the producers at Jamshedpur who have hitherto met the requirements of wire and wire nails from this part of the country.

73. The fourth plant we suggest should be erected in Hyderabad State by the Hyderabad Steel & Wire Products Ltd. who received a licence for the import of the requisite machinery long before this inquiry was instituted. While making this recommendation, we must state that we are not at all happy about the successful execution by this firm of the scheme which they have submitted to us, if they are to import and install the machinery of the type which has been described in paragraph 55. In the first instance, we must point out that this firm propose to manufacture their own billet from locally obtainable railway scrap by smelting the same in an electric Herout Arc Furnace of a capacity of 3,000 lbs. per hour and then re-roll the billets on a Merchant Rolling Mill into wire rods, for further processing into wire and wire nails and other products. We submit that the manufacture of ordinary mild steel in electric arc furnaces is a very expensive method of producing bulk steel and any product so manufactured will be unable to compete with steel made by conventional methods. In this connection, we quote the Iron & Steel (Major) Panel in paragraph 91 of Chapter III in their first Report:—

> "91. *Electric Steel made from scrap:* There are quite a number of small electric furnaces operating wholly on scrap in different parts of the country. In so far as they confine their manufacture to steel for castings or other special qualities of steel, they are a useful adjunct to the steel industry, provided that there is a market which they can economically serve. We have no proposals to make as regards these units except that they are a very expensive medium to produce a substitute for mild steel and as such, they have no future and deserve no encouragement."

Mr. J. M. Black, the British re-rolling expert stated that:—

> "The manufacture of mild steel in electric furnaces is uneconomical and firms possessing electric furnaces should consider the advisability of making special steels, i.e. Alloy Steel and Tool Steel and rolling down to Bars or Sections for commercial requirements."

74. Again the conversion costs actually paid by the Iron and Steel Controller to manufacturers of steel in electric furnace for processing it into finished products, is an indicator of how expensive it is to produce bulk steel in electric furnace. Such furnaces are only suitable for manufacture of steel castings or for alloy, tool and special steels. Even in the latter case their employment as such by small manufacturers is not desirable in view of the very expensive

equipment in shape of a slow motion rolling mill etc., which is required to run out a finished product of the appropriate quality.

75. In view of this, our recommendation is that the Company should proceed with their scheme on the basis of using locally manufactured rods, billets, arrangements for the supply of which have been planned by the Major Panel and are under the consideration of the Government of India. Such an action would be in their own interests, because it would reduce initial capital costs by Rs. 19,00,000. (Heraut Electric Furnace Rs. 200,000, Morgan Merchant Mill Rs. 17,00,000).

76. Labour is available and so is power, but the labour is not skilled and will have to be trained in the practice of drawing wire and manufacturing wire products. In Hyderabad, however, exist workers whose ancestors generations ago manufactured the famous Indian "Wootz steel" at and around Golkunda which was used for the world famous Toledo sword-blades, etc. Therefore, we feel that with little patient handling, indigenous labour will acquire the requisite skill for an industry of this nature. A works in Hyderabad is well situated to meet the requirements of wire and wire products from the Nizam's Dominion and the adjacent Central Provinces and Berar. They can also be despatched into Central India at destinations nourished by the Grand Trunk Chord of the Indian State Railways. With the completion of the post-war extension projects of the Nizam's State Railways, this works might also be in a position to supply the requirements of the consumers in the southern districts of the Bombay Presidency.

77. We recommend that last of such units should be installed in Mysore at a suitable site on the broad gauge system of railways near enough to Bhadravati Steel Works of which the new plant will be a subsidiary. Cheap skilled labour and cheap power are readily obtainable in the Mysore State and this plant should be in a position to look after the markets of this State and also in Cochin and Travancore. It should also be in a position to supply materials on the metre gauge system of the M. S. M. Railway right up to Marmagoa and the consuming markets in the Deccan Plateau.

78. So our proposals to the Government for the expansion and development of the industry are based firstly, on the optimum development of the existing factories producing wire and wire products. They should be allowed to so expand their capacity as would enable them to achieve maximum production at minimum cost and all facilities should be given to them for balancing their plants to achieve this purpose. Secondly, one unit producing 25,000 tons or five units of 5,000 tons each, according to expert advice, should be installed to achieve our target.

79. In making these proposals, we would like to draw the attention of all concerned to one very important matter. The above expansion programme should be put into execution only in the event of the demand for wire and wire products increasing as envisaged. This demand will increase only by stages according to how the various industrial, agricultural and building schemes come into operation. It is our opinion that the national planning will take time to permit various industries to come into operation, so that the increased production finds an outlet and is absorbed in the consummation of the Plan. For this purpose, the development of the industry should be by stages. We feel that quite for sometime to come, the existing units will be able to cope with the demand for wire and wire products. It is only when the demand so increases, as would necessitate import of these products, even after the existing units have put into execution their development programme that new units should be allowed to come into existence. It will be the duty of the controlling or licensing

authority to see that conditions exist to justify erection of one large or five small units. Because we have recommended five small units in case expert advice consider them to be economical, therefore their establishment need not be taken up with immediate effect. They should be installed by stages and in regions where increasing demand and distance from the existing plants justify their erection.

80. In dealing with the location of industry in various regions we have so far dealt with plants for the manufacture of wire and wire nails. There are other products besides, the manufacture of which was not taken up by any producer of repute or on a scale to make the enterprise a success or worthy of note. There are still other products the manufacture of which has not been so far attempted in this country. Consequently the information available on the subject is scanty and such as would not help us to work out a target or submit any concrete proposals beyond laying down a general policy as to how their production may be introduced in this country so as to minimize possibilities of unsuccessful operation. These products are wire ropes, wire chains, wire netting, wire spring, umbrella ribs and B.R.C. fabric.

81. The Indian Steel & Wire Products Ltd. and the National Screw & Wire Products Ltd. have instituted inquiries regarding the types plant required for the manufacture of these products. Indian Steel & Wire Products are interested in the manufacture of umbrella ribs, wire springs and B.R.C. fabric. The Indian Steel Rolling Mills at Negapatam are also interested in the manufacture of B.R.C. fabric and umbrella ribs. In the absence of any detailed information about the optimum economic unit for the manufacture of these products, we have already asked the Government of India in the then Planning and Development Department to obtain the required information from a firm of expert consulting engineers in the U.K. and/or U.S.A.

82. There is one point on which we have been advised by experts in the Indian steel industry that the manufacture of wire rope, wire chains, wire mesh and wire fencing requires the use of complex machines and manufacturers abroad have patented their processes. Both Sir Jehangir Ghandy than whom no better authority in the steel industry exists today and our colleague Sardar Ajaib Singh investigated this subject in the U.K. and U.S.A. They have been so convinced on this point that Sardar Ajaib Singh informs us that the Indian Steel & Wire Products Ltd. are negotiating for import of such patented plants on payment of royalties to their owners abroad.

83. We welcome this plan to establishing in this country new industries to be started with foreign technical guidance by local people who already possess considerable knowledge and experience of the manufacture of allied products. We would therefore recommend that on the completion of their paper plans by the existing manufacturers in the country, they should be carefully examined by the Government and such facilities be accorded to them as would encourage the early establishment of these industries in this country. In so doing, we do not wish any monopoly interests being created so as to preclude their manufacture in other regions and for that purpose, the licensing authority whom the Iron & Steel (Major) Panel have recommended for examination of new schemes of manufacture, should see to it that the declared Government policy of regionalization is made to operate as and when possible. We would at the same time emphasize that in the first instance, to make the establishment of these industries a success, opportunity must be given to the existing manufacturers in the country to carry out the necessary expansion in their plants in order that these products might be manufactured by persons who already have skilled labour, technical personnel and experience of wire and wire products industry.

84. We have indicated above that three established manufacturers wish to manufacture umbrella ribs and B.R.C. fabric. In regard to the former, it may be pointed out that about 3,000 tons of special carbon billets will be required to manufacture these ribs so as to meet the country's demand for umbrellas.

85. Having dealt with the location of a new large scale plant or five small scale plants, whichever may be the case under expert advice, to reach our target of 110,000 tons at the end of five years, we now propose to say a few words about the capital required. In one of the terms of reference, we have been asked whether the industry should be under Government ownership either on grounds of national interest or because private capital is unlikely to take it up and if so, whether it should be wholly or partly managed by the Government. If only one additional plant is to be set up in the country, then it will have to be approximately of a capacity of the Indian Steel & Wire Products Ltd., excluding the rolling mills section of the plant which is the most expensive item of capital cost in a plant of this nature. Considering the prevailing high prices of machinery in the exporting countries and the continuous upward trend in the prices noticeable there, we think a well-equipped and up-to-date plant for drawing wires and manufacturing nails and two or three of the other wire products mentioned above would be in the neighbourhood of Rs. 15 to 20 lakhs or so. Smaller units will cost definitely much less than this though as would be anticipated the capital will be higher considering the productive capacity of the small plant. In either case, the amount involved is such as would induce private enterprise in the country to enter this industry.

86. *Government Assistance*: We now propose to consider the type of assistance that should be given by the Government to these industries.

87. *Supply of raw materials*: In this country, more than any other, it is of paramount importance that iron and steel and their products should be produced and sold to the consumer at the lowest possible price. The reasons for this are multifold. We will deal with them later when considering the question of prices. If cheap steel products are to be produced in order to bring them within the purchasing power of the masses and then increase their *per capita* consumption, then it is essential that the basic materials from which they are produced must be made available to the processing industries at the lowest possible price.

88. In our planning, we have only recommended erection of plants for wire drawing and for manufacturing wire products because, we believe that the existing large scale wire rod producers are capable of meeting the requirements of the proposed new plant or plants. Messrs. Indian Steel & Wire Products Ltd., plan to expand their output of rods to about 160,000 tons per annum. The Steel Corporation of Bengal Ltd. are installing a 10" rolling mill on which they will manufacture rods in the event of any heavy increase in the demand for reinforcing purposes. The Tata Iron & Steel Co. Ltd. plan to put up a Skelp Hoop and Rod Mill of a capacity of 130,000 tons per annum of which one-third at least may be utilized for manufacturing rods. The Mysore Iron & Steel Works have also installed a rod mill of a capacity of about 25,000 to 30,000 tons per annum. The Major Panel have also recommended that on the 10" Brightside rod mill about 5,000 tons of concrete rods could be manufactured at the Ishapur Ordnance Factory.

89. So we feel that there will be ample supply of wire rods available for drawing wire in various regions of the country and for further processing them. We have therefore avoided the enormous capital cost of a Morgan Merchant Mill for producing wire rods. It has already been shown that out of a total

machinery worth Rs. 25 lakhs for which licences were issued to the Hyderabad Steel & Wire Products Ltd., the cost of a Morgan Mill was over Rs. 16 lakhs or more than 60 per cent of the total value of the plant.

90. If the existing plants in the country are to supply wire rods to these prospective manufacturers, then they in turn should be assured of the supply of their raw material. Messrs. Indian Steel & Wire Products Ltd., National Screw & Wire Products Ltd. and Indian Rolling Mills at Negapatam have emphasised that unless and until they are assured of adequate supplies of billets at a fair selling price, and in the case of the second, unless and until they are supplied with adequate quantity of pig iron at a fair selling price to enable them to produce their own steel both in their Demag Electric Furnace and in the Open Hearth Furnace which they have just installed, they would not be in a position to manufacture more rods for their own use or for their other customers. We think that this matter should receive the immediate attention of the Government in planning the future development of the iron and steel and their processing industries. We suggest that the interim proposals of the Major Panel must be implemented immediately so that the re-rolling mills at Jamshedpur, Belur, Ishapur and Negapatam can get into full production at an early date. The present scarcity of billets is likely to continue if we are to depend on the uncertain supplies from abroad. Indigenous production must be accelerated and energetic action by the Government to this end is imperative.

91. Equally important is the question of the supply of pig iron to the existing steel plants manufacturing steel in their own furnaces. The prices at which pig iron is offered today by the primary producers is quite out of proportion to its production costs. As we propose to deal with the question of prices elsewhere, all we would emphasize at the moment is that the Government and/or the Selling Organization as recommended by the Iron & Steel (Major) Panel should take up this question immediately with the producers concerned and fix a price on the lines indicated in the Report of the Major Panel with which we are in full agreement.

92. *Supply of cheap power:* The second point on which Government assistance might be required is in connection with the supply of cheap power. Messrs. Indian Steel & Wire Products Ltd. obtain their power supply from the Tata Iron & Steel Co. Ltd. So far there has been no difficulty in receiving adequate quantity of electric power at a fairly cheap rate. Tatas are themselves agumenting their capacity so as to reach a maximum production of about a million tons of finished steel. At the moment, they have adequate electric power in reserve, but with the growth of other subsidiary industries, in which they have an interest this might not be possible. It must therefore be seen that the interests of the Indian Steel & Wire Products Ltd. are in no way undermined. When this works was started and the Tariff Board granted protection, it was on the tacit understanding that adequate supplies of billets and electric power would be available. Since then this industry has made great progress and performed war work of considerable importance. It is a national asset and has a priority of claim for the supply of its raw materials and power in order that it might exist side by side with the pioneer steel works which is, so to say its parent. The Bengal Electricity Power Board will have likewise to consider sympathetically the application for increasing the load that will be required by the National Iron & Steel Co. Ltd. and their subsidiary, the National Screw & Wire Products Ltd. We do not think there should be any difficulty in supplying electric power to the plant in South India from the Mettur Project. We were informed by the Indian Rolling Mills' Director that cheap power is

readily available at Negapatam and further price reductions would be made when the power station at Mettur worked to maximum load.

93. *Technical Assistance:* The third point on which Government assistance might be required is in respect of offering technical advice and for placing at the disposal of the new plants in the various regions technically trained men to form a nucleus staff of skilled workers, who in their turn would train indigenous labour in the various processes of the industry. We have indicated above that manufacture of wire mesh, wire netting, wire springs and wire chains has not yet been undertaken by any firm of standing on a commercial basis, though sporadic attempts have been made by inexperienced people to manufacture such products as wire chains and wire springs with very unsatisfactory results. If plants involving patented processes are imported, it is presumed that provision will be made in any arrangement or agreement to lend the services of technical staff, who would stay in this country for a period of years and train indigenous labour in the working of the plant and for its efficient maintenance.

94. In the same way, arrangements will have to be made with the existing manufacturers of wire and wire products to take up a number of apprentices to be trained in the processes of drawing wire, annealing and galvanising it and for manufacturing nails so that a nucleus of skilled labour might be available when the new factory or factories come into operation. The industry being in the hands of such firms of repute and standing like the Indian Steel & Wire Products Ltd. and the National Iron & Steel Co. Ltd., we are confident that such assistance will be given willingly for the future development of the industry, but in the event of any reluctance being shown to train operatives in the existing factories, then it would be for the Government to see that the desired training is accorded. After all this is a protected industry and both the tax-payer and the consumer have been made to bear additional burdens to help the industry to become securely established. Having done so it is up to the industry to give assistance for its expansion for the benefit of those who have contributed towards its well being.

95. We also recommend that if any of the existing plants or prospective manufacturers desire to send their own employee abroad for acquiring skill and further knowledge in similar plants operating in other countries, Government should given them all facilities for such a training.

96. We will now deal with assistance in shape of protection required by the industry. Since its inception, the manufacture of wire and wire products has been a protected industry. Brief particulars of the degree of protection afforded will be found at the beginning of this chapter. As indicated in paragraph 5 of Chapter I, we have been asked not to examine in detail the quantum of protection that may be necessary for the development of this industry. We are only asked to indicate whether any protection is necessary or not. In this connection, we hold the same view as expressed by the Iron & Steel (Major) Panel regarding the basic industry. *It is now evident that the basic steel industry as it exists today needs no protection.* In view of the prevailing very high prices of steel and steel products both in this country and abroad, we feel that if the existing conditions were to prevail for some time to come yet, then in the case of wire and wire products industry also, the need for protection may not be justified. An inquiry may be instituted by the Government on the termination of the Defence of India Rule under which date for the continuance of the current duty has been extended. Whatever be the outcome of such an inquiry, we feel that to guard against the possibility of foreign dumping, the industry be adequately protected and that the existing protective duty should remain on the Statute Book though its enforcement may not be necessary.

97. We also recommend that when the production of other wire products is concerned, the scope of the protective duty should also include these products when satisfactory evidence is tendered to show that the requirements of the country would be met by the indigenous products substantially if not fully. The Tariff Board in 1934, excluded the grant of protection to the manufacture of barbed wire, wire fencing and wire netting with a view to prevent unnecessary burden on the agricultural community, who are the principal consumers of these materials during peace time. We feel that the time has now come to dispense with this preferential treatment of the so called agricultural community, because we feel that in that community, wire fencing is made use of only by wealthy farmers and zemindars who have large tracts of land or orchards yielding considerable income. The fact that only 5,000 tons were then imported is indicative of the proof that the number of such agriculturists was small considering the size of the country and the fact that 90 per cent of the people live on the land. As such, this preferential treatment should be abolished; otherwise, we feel that the introduction of these new industries would be further and unnecessarily delayed. It is very likely that such protection may not be needed at all or may be needed for a very short while. So if the Government accepts our proposal and creates an atmosphere of confidence in the minds of the prospective industrialists to take up the manufacture of these products by bringing them within the ambit of the Iron & Steel Protection Act, then we feel that the community as a whole and the agriculturists in particular will benefit in the long run.

98. We would go one step further and state that Government should declare it a cornerstone of their future industrial policy, that in the event of proposals being submitted to them for the establishment of new industries, which have a reasonable chance of meeting the requirements of this country, at fair prices, then assistance in the shape of protective duties should be imposed so as to enable the industry to establish itself in the country.

99. *Control of Industry :* The Government of India in declaring their industrial policy have clearly and categorically indicated that in a planned economy control of industry is an essential feature without which the development cannot be regulated nor the national assets and income be diverted into channels which would bring about pre-determined results. They have particularly stressed the necessity of controlling profits without discouraging private enterprise and also the necessity of improving industrial production in the interests of the consumers both within and without the country. If "maximum employment" is to be the foundation on which an industrial planning is to be based, then we feel that the following controls are necessary if efforts to increase the aggregate and *per capita* income are to be successful :—

(1) Control of basic materials to ensure equitable distribution ;
(2) regulation of output in accordance with demand;
(3) control of prices ; and
(4) regulation of exports and imports.

100. It is essential that any benefit arising out of the low prices at which steel is to be sold in the future should be passed on to the consumer in respect of the products of the processing industries of the type we are considering. Therefore, the first essential control, we think, which should be imposed is in respect of prices, but in so doing, it should be made quite clear that the Selling Organization, upon whom the onus of fixing prices will rest, will be required so to fix them that the prospective enterprises are able to sell at a price which allows due weight being given to the higher cost of production which is bound to occur in the initial stages.

101. The consumption of steel has remained stagnant during the first 30 years, nay deteriorated substantially when consumption in 1938 is compared to that of 1914—though the population of this country has increased phenomenally during the period; if not the principal cause, one of the causes for such a deterioration has neen attributed to the high price of steel. Consequently the prices of steel products had to remain high.

102. We do not wish to go into the details of the trend of prices of wire and wire products, but all we want to state here is that the prices are high today for reasons mentioned in the above paragraph and the matter needs investigation so that the industry is in a position to offer these products to the consumers at prices compatible with its own cost of production and yielding a reasonable return after adequate provision having been made for depreciation etc.

103. For the same reason, we also recommend that the present structure under which basis prices are fixed according to the prevailing import price at the ports, should be done away with and a price structure should be introduced based on the works costs of production to which must be added, "a liberal percentage for depreciation and all usual overheads and a rate of profit which on the one hand would maintain the existing industry in the healthy and financially sound position and on the other would attract the amount of capital which would be required for its rapid development. It should also include all direct and indirect charges for sale and distribution which cannot be recovered from the consumer."

104. As the products of this industry are sold in competition with foreign products, the price structure was so laid down by the Tariff Board that the price of indigenous products were based on import price of steel at the major ports. When sales were made in the upcountry, the railway freight chargeable was calculated from the nearest port to the upcountry destination instead of from the works from where the goods were actually shipped. This meant an additional burden on the consumers which varied from Rs. 30 to Rs. 60 according to the destination. Considering that the Tariff Board calculated the conversion charges at works at Rs. 63 to 64 per ton from wire rods to wire nails, the incidence of Rs. 30 to 50 per ton for transporting products of the industry to upcountry markets must be considered excessive. It may not be out of place to mention here that the steamer freight for bringing pig iron into British-India from .Middlesborough was 17sh. 6d. and for steel it was 21sh. 6d. or Rs. 12-9-0 and Rs. 14-12--0 per ton respectively. Another disadvantage of so calculating the freights in charging prices to the consumer was that whereas the upcountry consumer was made to bear this exorbitant railway freight, the consumer at the ports did not pay a pie even though the goods were despatched to Calcutta the nearest port 150 miles from the works or to Karachi, a distance of over 2,000 miles from the works. The absurdity of this position will be manifest. While, we appreciate that the vast distances in India makes it difficult so to arrange freights that industrial products are available throughout the country at approximately the same prices, nevertheless it should be possible so to fix rates that no place should have to pay more than Rs. 30 per ton and no place should completely escape the incidence of railway freights, as has been the case of ports in the past.

105. Next in importance is the control of the basic materials required by the industry. We have already indicated that either one large scale plant or several small scale plants which are to be set up in the country are to obtain their supply of wire rods from the existing re-rollers, who have planned for a considerable increase in their output. We have also indicated that the Indian Steel & Wire Products Ltd. and the National Screw & Wire Products Ltd. must receive adequate supplies of billets and the latter must also receive adequate

supplies of pig iron to manufacture their own steel and billets. It will be incumbent upon any controlling organization to see that adequate steps are taken to ensure that the basic material needs of the industry should be met to the extent we have indicated.

105. As a matter of fact, it must be the first duty of any controlling organization to issue licences for the erection of a new plant in any particular region recommended by us only after satisfying itself that due provision has been made to secure the necessary basic materials. This may seem very obvious but we do not wish history to repeat itself and the new plant to face the same problems which the Indian Steel & Wire Products Ltd. faced in the earliest days of its career. It should also be the duty of the controlling organization to see that the arrangements made by the existing manufacturers are in no way interfered with. It will militate against national well being if the efficiency and output of an existing industry secured after considerable sacrifice is reduced for the benefit of new units. It should further be the duty of the controlling authority to see that for reasons of price or for other considerations the suppliers of basic materials do not withhold supplies to the infant industries in an attempt to throttle internal competition right from the beginning.

106. Equally important is the control of the output of the industry, which should be regulated to the necessities of the time. We must reiterate that this should not involve undue interference in the management and working of private enterprise. It only means that whenever the total nationwide demand falls short of the country's production that reduction throughout should be on a regional basis. This could best be achieved by agreement between the companies constituting the industry, action by the controlling authority being necessary only in the absence of such agreement.

107. *Control of exports:* Exports of the products of this industry should be brought under control. In Chapter I we have indicated the reason why we should export the products of this industry, particularly in markets where India has a natural geographical advantage. There is undoubtedly a scarcity of manufactured goods in neighbouring countries, but there is also a great scarcity in this country. It should be the first duty of the industry to supply the whole demand of this country and the high prices probably obtainable abroad should be resisted as a temptation to starve the home markets. It is primarily for this reason that we consider that export should be controlled and prohibited unless made against a licence which should only be issued if the controlling authorities are satisfied that the industry has an exportable surplus.

108. *Control of imports:* In the same way, imports of wire and wire products will have to be controlled. Until the new units are in full production, it may be that domestic production may be unable to cope with the internal demand for wire and wire products and it may be necessary to import these products in such quantities as would balance local production with consumers' demand. Failure to do so can only result in continuance of high prices and black markets. As in the case of exports, imports should be against licences to be issued only to the extent required to close the gap between production and demand.

109. *Control of quality:* The last control, which would be most desirable is in connection with the maintenance of the quality and high standard of output of the industry. This matter is of such importance that Government of India have themselves taken it up as a matter of national industrial policy. The products of this industry have so far been manufactured strictly to British and Indian Standard Specifications. It is essential in the interests of the industry that this practice should continue and be made applicable to the production

of other plants which may come into existence. In such cases, Government will have to make arrangements similar to those that have been made at Jamshedpur for testing the products of the industry. Fortunately, it has been possible for us so to plan that the prospective producers will purchase their wire rods from the existing manufacturers. Again, the existing manufacturers will produce them from billets indigenously manufactured, the heats from which these billets or rods have been produced would automatically be tested. At times, grave complaints have been received from markets overseas about the poor quality of Indian goods and their constant variation with the result that the Government of India were compelled to introduce the Agmark for some of their products. The wire and wire products industry in India has developed a remarkably high standard of quality. Having regard to export possibilities, it would be extremely unfortunate if new production units were allowed, through lack of adequate control, to depart from the high standards set by the pioneers of this industry in India.

111. In concluding our observations on the subject of control, we must emphasize our views that control of the basic material, control of output, of imports and exports should not be permanent. They are necessary only so long as there is a scarcity of these products. As soon as provision has been made for the supply of basic material and as soon as a stage is reached when the producing plants are able to meet internal demand, the controls should be relaxed. We agree with the Iron & Steel (Major) Panel when they state "it can never be in the national interests to maintain controls which result in making a whole industry or any part of it the close preserve of some special interests."

112. *Sales Organization :* Before the war, the only important manufacturers of wire and wire products namely, the Indian Steel & Wire Products Ltd. distributed their products through their selling agents who in some parts of the country were the same firms engaged by Messrs. Tata Iron & Steel Co., Ltd. to sell their products and those of the Steel Corporation of Bengal, the Eagle Rolling Mills at Kumardhubi and the Indian Rolling Mills at Negapatam with all of whom they had made a working arrangement popularly known as the Tata-Scob Sales Agreement. During the war, this firm as well as the National Screw & Wire Products Ltd. and even the primary producers marketed their products through the controlled stockists in accordance with selling arrangement made by the Iron and Steel Controller. The question now is what arrangements should we have for the marketing of these products during the first five years of the Plan. Should they be marketed by individual producers independently or should they form a central selling organization or finally should they join with the primary producers and use the Tata-Scob Selling Organization.

113. The Iron & Steel (Major) Panel recommends that as the iron and steel industry primarily consisted of the three producers, viz. The Tata Iron & Steel Co., Ltd., the Steel Corporation of Bengal Ltd. and the Mysore Iron & Steel Works and as their management were in the hands of people noted for their high business acumen, skill and experience, they should prepare and submit to the Government for their approval a scheme under which the form of selling organization on lines of the Tata-Scob Agreement should be set up which would fix the prices on the lines recommended by them and undertake to perform this and any other functions, obligations and duties which would otherwise may be imposed on them or performed by the Government itself. As far as the function of selling proper was concerned, this organization was to be responsible for the sale and distribution of all iron and rolled steel products produced in whatever form and of whatever quality. It was also to be made responsible for the import from the most favourable sources of such quantities of iron and steel and steel products that might be necessary to import with a view to balance

the indigenous production and meet the requirements of the consuming public. This organization was again to be made responsible for developing the export markets in countries east of Suez, where India by her geographical position was economically better placed to trade with them and supply their needs. This organization was also to watch the standard and quality of output both for internal and foreign markets so that the products of the highest quality comparable to those manufactured in U.K. or the U.S.A. might be on the markets at competitive prices so that India's hold over these markets may be maintained and strengthened.

114. This method of selling basic steel and such of the products which are manufactured on large scale or even on small scale has unique advantages. In the first place, during the last 25 years, Tatas have built up a huge selling organization with a net work of branches in the various regions of the country and more than 2,000 dealers who have retail establishments in almost every town. The Steel Corporation of Bengal and the Iron & Steel Co., Ltd., were quick to realize the benefits of such a ready made sales service. The Mysore Iron & Steel Works have also realized how beneficial it would be to market their products during the post-war period through the same organization and their state officers agreed to the distribution of their products through such an organization of the industry as and when formed. With a view to bringing its benefits to the Re-rolling Industry, the Major Panel recommended to the Government that such an organization of the industry may also be allowed to have representation of such of the re-rolling mills, who have been organized and have found a place in the industry.

115. As this organization is required to develop an export market, it is confidently anticipated that expert officers will be sent out to carry out preliminary survey in regions already indicated by us to collect statistical data, build up contact with distributors of iron and steel there and to obtain all particulars regarding the quality, sections and sizes of products which are demanded by the consumers in the foreign markets. We believe that offices will have to be opened in East Africa, Egypt, Palestine, Persia, Afghanistan, Burma, Malaya, Hong Kong and Shanghai. As a matter of fact, we understand arrangements are being made to open an office in Burma.

116. Two of the large scale manufacturers of wire and wire products having been already classified as efficient re-rolling mills, we feel that by distributing their products throuh this proposed Centralized Sales Organization, the advantages accruing to the industry would be many. First and foremost, it would enable the wire and wire products industry to market their goods through merchants whose financial resources and business ability are already known to this organization. It would reduce the cost per ton of distributing products. What is perhaps more important is that it would eliminate cut throat competition among the various units of the industry. This organization would be better placed to fix fair selling price, which would have to obtain the approval of the Government and as such all the units would have the opportunity to work under an arrangement whereby they could concentrate all their attention on running their plants efficiently without the constant temptation to lower quality under pressure of cut throat competition. In the export market, distribution of the products of this industry along with those of the major industry through one selling organization would prevent the foreign buyers from playing one selling agent against another and thus creating conditions of unfair competition. Further, if small units are to be installed in the various regions of the country, then financially it would be impossible for them to build up an efficient sales organization either in this country or abroad. This in our opinion, is one of the most important reasons why the existing producers

of wire and wire products and the prospective ones should join the selling organization which the Major Panel have recommended for the iron and steel industry of which after all they are an all important offshoot.

117. The advantages of such an organization are many and varied, but if any manufacturer desires to keep out of it and market his product independently, there should be no restriction placed upon him nor should any attempt be tolerated to coerce him to join such an organization. In the same way no attempt should be tolerated on his part to coerce other manufacturers, particularly, the new ones who will be working on a small scale by unhealthy competition with a view to eliminate them and then to exploit the market.

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CHAPTER IV

PRIMARY HARDWARE (FASTENERS), BUILDING HARDWARE AND DOMESTIC HARDWARE

118. *Fasteners—nuts, bolts, rivets, spikes, and screws:* Soon after the first Tariff Board inquiry was completed, Messrs. Henry Williams Ltd., started fabrication of some of the railway track fittings like, chrome steel points and crossings, bearing plates, fish-bolts strecher bars, gibs, cotters and also rivets and dogspikes. Subsequently, they commenced manufacture of nuts and bolts. They applied for protection and the Tariff Board in their Report dated the 14th December, 1926 recommended an *ad valorem* duty of 17 per cent plus Rs. 15 on fabricated steel. Since the range of articles included under this term was so wide and the prices so varied, they were unable to introduce any system of specific duties, which would have afforded effective protection individually in all the cases.

119. The firm applied again for protection in 1930 and a special enquiry was instituted, as it was found that the *ad valorem* duty even with an extra of Rs. 15 did not afford sufficient protection to some of the items they manufactured and therefore the Board in their Report dated the 17th October, 1930 admitted that the specific duty was preferable to an *ad valorem* duty from the protection point of view, particularly when prices were liable to considerable fluctuations. Therefore, they recommended a duty of Rs. 45 per ton on fish-bolts and ordinary nuts and Rs. 40 per ton on dogspikes, rivets, etc. The Board went on to say that:—

> " if the total demand of these articles were met by Indian manufacturers, a considerable improvement in the position of the Indian Steel Industry would be effected. We claim therefore that our proposals are not only justified on the ground of tariff equality, but are in full accord with the policy laid down by the Steel Industry (Protection) Act."

In 1934, the Tariff Board reviewed the position and revised the schedule of duties on the ground that the company was not formerly equipped for the manufacture of steel bars required for making these products, but they had since the last inquiry installed a rolling mill in which it was proposed to roll bars from billets supplied by the Tata Iron & Steel Co. Ltd. In revising the duties, they took into account the fact that the company would themselves roll all the bars required from billets at Rs. 64 per ton delivered at their works. The duties were accordingly revised and the Government were recommended to charge specific duties of Rs. 31-4-0 per ton on ordinary commercial bolts and nuts, Rs. 37-8-0 per ton on rivets, Rs. 86-4-0 per ton on fish-bolts and nuts and Rs. 53-12-0 per ton on dogspikes, gibs, cotters, key and key bars. After this Tariff Board enquiry, Messrs. Henry Williams Ltd. amalgamated with Messrs. Guest, Keen & Nettlefolds, the world renowned British firm of fastener manufacturers and started fabrication of nuts, bolts, rivets, spikes, etc. on a large scale in the name of Messrs. Guest Keen Williams Ltd.

120. The Indian Steel & Wire Products Ltd. also installed a unit for manufacturing nuts, bolts and rivets at their works in Jamshedpur and Messrs. National Iron & Steel Co. Ltd., Calcutta started a subsidiary called the National Screw & Wire Products Ltd. Besides these firms, railway workshops, ordnance factories and some of the engineering houses in the country, particularly those

interested in the fabrication of bridgework, wagons carriages and railway equipment, manufactured some fasteners for their own use. The demand during the war was so great that other small suppliers were encouraged to take part in the production of these stores, particularly in Calcutta, but owing to their improvised equipment, the quality of their output and the volume of production was poor.

121. *Current capacity and output :* Messrs Guest, Keen Williams Ltd. have their main works situated at Shalimar near Calcutta. About the middle of the war, they set up another plant at Bhandup near Bombay, but we were informed during our visit to their factory that they propose to dismantle this plant in Bombay and transfer the machinery to Calcutta to be housed under one roof at Shalimar. At their plant in Calcutta, besides manufacturing railway equipment relating to the permanent way mentioned in paragraph 117 and other track and signal materials including steel sleepers, they make bolts, nuts, rivets and spikes for other purposes as well. Besides up-to-date automatic machines for manufacturing fasteners, they have a very well equipped machine-tool shop and heat treatment department. Their current output of nuts, bolts, rivets and spikes is about 12,000 to 15,000 tons per annum and they propose to increase their capacity to 30,000 tons per annum. They have three Double Duo Rolling Mills, one 8 ″, one 10 ″ and one 14 ″ on which they roll their own limit bars for the manufacture of bolts, nuts, rivets and spikes. The capacity of this mill is to consume 4,000 tons of billets per month and the bulk of this is utilized for the manufacture of railway track and other fittings including laminated helical and volute springs for the railways.

122. Messrs. The Indian Steel & Wire Products Ltd. have also a separate department for the manufacture of bolts, nuts and rivets, equipped with the latest type of automatic machinery. The company have a skilled staff well versed in turning out fasteners of superior quality. The current capacity of their plant is about 1,000 tons per annum.

123. The National Screw & Wire Products Ltd. have not completely installed their plant. Their current capacity is about 50 tons per month of rivets.

124. Messrs. Burn & Co. Ltd. and Jessop & Co. Ltd., two of the Calcutta Structural Engineering firms manufacture about 100 tons of rivets per month which they utilise in railway wagon construction. Similarly, Messrs. Tata Iron & Steel Co. Ltd., also have a small unit for manufacturing about 50 tons of rivets per month for use exclusively in their own plant and those of their subsidiaries.

125. During the war, the demand for fasteners increased considerably and the Anglo-American Steel Mission reported that the supply of indigenous bolts, nuts, etc. for war purposes was a serious bottleneck in our war effort. In Table No. 5 below, we give the total production of bolts, nuts, rivets and spikes in 1939 to 1944.

TABLE No. 5.

Description	1939	1940	1941	1942	1943	1944
Guest Keen Williams Ltd.						
Bolts and Nuts	2,380	4,146	5,118	4,381	4,756	5,411
Rivets	1,849	3,500	4,050	4,352	3,363	1,622
Spikes	3,650	3,412	4,741	3,657	5,988	7,650

TABLE No. 5 (*Contd.*)

Description	1939	1940	1941	1942	1943	1944
Indian Steel & Wire Products Ltd.						
Bolts, and Nuts ...	112	341	537	427	698	866
Rivets	—	62	219	171	191	186
Other Re-rolling.						
Bolts, Nuts, Rivets & Spikes	—	96	118	3,366	4,740	4,804
Total ...	7,991	11,557	14,783	16,354	19,736	20,539

126. The above Table has been prepared from the statistics of the Iron & Steel Industry in India (1939-44), as compiled by the then Steel Commissioner in India. India's total requirements of bolts, nuts rivets and spikes were estimated by the Director-General of Munitions Production at 40,000 tons per annum of which, the production in the country during the period 1941-44 was as under :—

1940	11,557 tons
1941	14,783 ,,
1942	16,254 ,,
1943	19,736 ,,
1944	20,579 ,,

The balance was imported from the U.K. and U.S.A. under Lend Lease, though efforts were made by the D.G.M.P. Section of the Supply Department to obtain further supplies from other small producers in and around Calcutta. The total output of these firms was estimated at 1,200 tons per annum, but because of their improvised equipment and unskilled labour, the quality of their output was inferior and the price paid to them was 50 per cent higher than that paid to Messrs. Guest Keen Williams Ltd.

127. In Table No. 6, we give the imports of bolts, nuts, washers, rivets and nails excluding wire nails during the quinquennium 1935-40.

TABLE No. 6.

Imports of bolts, nuts, washers, rivets and nails (excluding wire nails). 1935 to 1940.

(In tons).

Description	1935-36	1936-37	1937-38	1938-39	1939-40
Bolts & Nuts Protected. ...	12,580	9,404	10,550	8,817	5,693
Nails, Rivets & Washers					
Protected. ...	7,993	5,879	8,033	6,548	3,294
Non-protected. ...	7,947	6,433	7,264	4,622	5,884
Government Imports ...	—	192	67	67	179
Protected. ...	—	192	67	67	179
Non-protected. ...	368	168	124	58	76
Total ...	28,888	22,268	26,105	20,179	15,305
Old for remanufacture. ...	1,840	874	1,533	5,709	3,627
Grand Total ...	30,728	23,142	27,638	25,888	18,932

128. This Table has been compiled from the Statistical Abstract of the Seaborne Trade of British-India. Unfortunately, washers and nails other than wire nails have been included with rivets, which makes it difficult to measure with any degree of accuracy, the volume of imports of nuts, bolts, rivets in this country before the war. On an average, the total import of these materials was 25,165 tons per annum of which the average import of nails, rivets and washers was 6,350 tons. If we subtract half the latter figure to cover import of nails (non-protected), then the total average import of fasteners was about 22,000 tons before the war. If we add the local production of about 10,000 tons of Messrs. Guest Keen Williams Ltd., and about 4,000 to 5,000 tons being the production of the railway workshops, engineering firms and other small manufacturers of fasteners in the country, then the pre-war consumption of fasteners could be placed at about 34,000 to 35,000 tons per annum.

129. From paragraph 126 above, it will be seen that the average production of indigenous manufacturers during the war was about 16,500 tons, but imports for civilian consumption during the period are not known. From the figures of imports given by the Steel Commissioner for 1944 it is found that during that year, 20,230 tons of fasteners were imported. These figures of imports during the war period are not of much value from the point of view, as they relate to consumption for purposes, the majority of which no longer exist.

130. We have already indicated in paragraph 45 Chapter III, the lines adopted in fixing the target for the wire and wire products industry. In fixing the target for the fasteners industry, we are faced with the same difficulty in assessing the potential demand, owing to lack of any information regarding probable consumption of fasteners for the so many post-war industrial and agricultural schemes and schemes for social uplift of the masses particularly in respect of education and health. We have, therefore, proceeded on the same lines as adopted in fixing the target for the wire and wire products industry.

131. Working again on the assumption that during the war, more than 80 per cent of the civilian demand was starred and about 50 to 60 per cent of this back log of demand would have to be satisfied during the first five years of the Plan, there is a potential civilian consumption of about 85,000 to 90,000 tons which might have to be satisfied at any time during this period. To add to this, there are vast schemes of post-war development, one of which is to establish a Shipbuilding Industry in this country which is one of the largest consumers of fasteners in other countries. Considering all factors, we feel that it would be conservative estimate to fix the target at 60,000 tons per annum for the post-war period. This, of course, will be feasible only if major schemes of development, repairs and renewal are put through. This is one of those items of hardware which will immediately command a large export market, provided it is manufactured according to the British Engineering Standard Specifications or the Indian Government Standard Specifications, as is done by Messrs. Guest Keen Williams Ltd., and by the Indian Steel & Wire Products Ltd.

132. When the plant which is being transferred from Bombay to Calcutta is fully operating, Messrs. Guest Keen Williams Ltd., will increase their total output from the present production of 15,000 tons to 30,000 tons. The present capacity of the Indian Steel & Wire Products Ltd. is approximately 900 to 1,000 tons which they propose to raise to 4,000 tons. The National Screw & Wire Products Ltd., plan to raise their capacity to 2,500 tons of nuts, bolts and rivets so that the existing plants, when they complete their expansion programmes would between them produce approximately 35,000 to 36,000 tons of fasteners, leaving a gap of about 25,000 tons for the production of which new units will have to come into operation during the first five years phase of the Plan. In

working out target, we have ignored as being of no consequence, the productive capacity of the small plants in and around Calcutta. In peace time, we feel that these small producers have no place in the organization of this industry. We would not recommend them to undergo heavy expenditure in altering their existing plants or in putting up new ones, because already in Eastern India exist three plants which have a capacity and output considerably greater than any that we propose should be set up in other parts of the country.

133. *Wood screws:* Attempts made in this country before the war to manufacture wood screws, were on a very small scale and proved abortive. In para graph 31, we have already indicated that the Tariff Board in 1934 refused to grant protection to a firm of manufacturers in Karachi. This was done on the grounds that the firm's capacity was considerably less than the total demand and the basic material required had to be imported. Conditions have changed since then considerably and therefore, in our recommendation for the future development of this industry, we propose to include also this important item of fasteners.

134. *Method of achieving the target:* As we had expressed some doubts as to the desirability of transferring their Bombay plant to Calcutta, to be housed with their major works there, Messrs. Guest Keen Williams Ltd. wrote to us as under:

> " We understand that it is the Government of India's policy to decentralize industries as far as possible and to avoid the concentration of any particular industry in one spot in the country. While it is agreed that this is a desirable object for some of the heavier industries, it must be pointed out that in a highly specialized industry such as the manufacture of bolts and nuts, it presents many difficulties.
>
> " You will have seen during your visit to the Works that a very extensive tool room and heating equipment is required in the manufacture of these articles and the splitting up of the plant into two or more units in various parts of the country would entail the provision of a tool room and heating equipment at each factory together with all the necessary high grade technical supervision.
>
> " The Industry demands the regular and ensured supply of bars and rods rolled to very close special tolerances. We have found it essential to roll such materials in our own mills as no other rolling mills or steel works have been willing to give the necessary attention and care required in the production of these bars and rods. This means either that rolling capacity is to be available at each of the contemplated plants, a very big undertaking in itself, or that the rolled bars and rods are to be despatched by railway from the central rolling mills to the various plants. This brings in the question of freight disadvantages. We have had to close our new Bombay factory and are bringing all the machines to Calcutta, as it would be impossible to manufacture economically in Bombay, when we are called on to pay a freight of Rs. 53 per ton on all the bars required, including the high percentage of wastage involved in this industry. Whatever the freight charges, this represents a disadvantage when it is remembered that such freight had to be paid on the wastage.
>
> " A very large proportion of the output of bolts, nuts, rivets and spikes is utilized by the Indian railways, who enjoy a freight advantage in as much as they can transport materials at Railway Material Rate of freight. Any article produced at a distance from the rolling mills, therefore, will start off with a disadvantage as Public Tariff Rate of freight (which is always

much greater than Railway Material Rate) has to be paid on the raw material requirements including wastage."

135 Despite what this pioneer firm of manufacturers have submitted on this subject, it is our opinion, that the cost of establishing a Tool Room for a plant manufacturing 5,000 tons of fasteners per annum would not be disproportionately high having regard to the total capital cost of the complete plant. It is our further view that a Tool Room is essential in any unit of this size in order to maintain their machinery in first class working order.

136 Consideration might however be given to the establishment of a central machine tool shop, should any of the small scale manufacturers not wish to manufacture their own dies and tools. As an alternative Government might examine the possibility of utilizing excess tool room capacity in their own Ordnance Factories for example such as the one in Jubbulpore, Kanpur or at Ishapur.

137. In regard to their statement about the manufacture of limit bars and rods, rolled to a very close and special tolerance, this is not an insuperable difficulty as the rolling practice has considerably improved during the last 25 years at the various plants of the primary producers, so as to enable them to produce goods inferior to none obtainable from anywhere else. At present, it is recognized that the primary producers are not anxious to supply limit bars and rods for this industry, rolled to special tolerances, because of the overall steel shortage in the country and the necessity for attaining maximum production of the commercial sizes. This difficulty should disappear when India's steel production is raised to three million tons. We suggest that steps be taken by the Government to ensure the availability of these bars rolled to special tolerances. We therefore do not consider it at all essential that such units in the country which we want to be set up in various regions need possess rolling mills to obtain their supply of limit bars. As a matter of fact, we desire the same practice to be followed in this country as has been in vogue in such large steel producing countries like Germany, France, Belgium, Luxemburg, where small plants manufacturing both wire and wire products and fasteners exist all over the country and where the supply of wire rods and limit bars are obtained from the principal manufacturers.

138. In regard to the exorbitant incidence of freights, the Iron & Steel (Major) Panel and this Panel have already pointed out that to be one of the contributory causes as to why the consumption of steel has remained stagnant and why industries utilizing iron and steel as their basic product have not developed in the interior of this country.

139. Lastly, they have argued that a very large proportion of fasteners is utilized by the Indian State Railways to whom these goods are being supplied under a special Railway Material Rate. If limit bars are to be despatched to fabricators all over the country, then they will be so despatched from the works of the primary producers at the full public tariff rate and only finished products will be despatched to the railways from the fabricators' plant over short distances at the Railway Material Rate. In this connection, we may point out that, as these fasteners are to be manufactured in about five factories in different regions, the railways might be required to give Railway Material Rates, for the despatch of such quantities of bars from the primary producers to the fabricators as would enable the latter to produce such quantities of fasteners, which the railways have agreed to purchase from them. In regard to the freight involved in the wastage, it may be pointed out that with the automatic plants which are being utilized for the manufacture of fastener stores to-day, wastage involved is considerably reduced and it should not be an unduly heavy burden in the total cost of production.

140. It might be advantageous to Messrs. Guest Keen Williams Ltd. to bring all their activities under one roof to save heavy overheads arising out of employment of expensive supervisory staff at two different places in the country, but the same cannot be tendered as a justifiable reason for not regionalizing the industry on the lines indicated by the Government. We are confident that such regionalization in respect of manufacture of fasteners would be advantageous from all points of view and we make the following recommendations accordingly.

141. In the matter of manufacturing this item of hardware, we have advised the Government of India to ascertain from abroad, the capacity of an optimum economic plant for the fabrication of fasteners. In the event of the recommendation being made for the erection of two plants of a capacity of 12,000 to 15,000 tons like the present plant of Messrs. Guest Keen Williams Ltd., we recommend that one of these plants should be installed at Ernakulam or Cochin and another one in the Punjab at Moghulpura. In submitting our proposal for the erection of a plant in Ernakulam or Cochin proper, the important consideration in our mind has been the supply of limit bars and the distribution of finished products. In this case also, we suggest that the Mysore Iron & Steel Works should supply the quantity of rods required for this purpose at a fair selling price, which would have to be low enough for the prospective *entrepreneur* to refrain from installing a rolling mill of his own.

142. The railway freight will be an important element in working out the cost of the limit bars of f.o.r. Cochin or Ernakulam as the routine involved is a little circuitous, until the proposed chord line linking Shoranur with a suitable destination on the Mysore State Railway materializes. For the same reason, as in the case of wire and wire products, we suggest that the Mysore Iron & Steel Works be invited to contribute 1/3 of the share capital of this enterprise in order that they may be able to have a share in the profit and thus make up for the high cost of production and the special price at which they may have to offer the bars to this firm. In the event of their refusal to do so, the Indian Rolling Mills at Negapatam may be asked to supply the required quantity of limit rods and as these will be despatched by sea, a works at Cochin will be able to get their materials at a fairly reasonable price, it being assumed that the basis price for such bars will be uniform in all cases and will be one fixed by the Selling Organization suggested by the Iron & Steel (Major) Panel for the basic industry, after having received the approval of the Government. A works at Cochin or Ernakulam has other very important advantages. From this destination, materials can be despatched to any large or small port right up to Vizagapatam, where it is proposed to build one of the largest shipyards in the country, which will consume a substantial quantity of these fasteners. From the same place, products of this industry could be despatched to other major port of Bombay and further up to Karachi if necessary. At Bombay also, it is proposed to build another shipyard which will require a large quantity of fasteners in the fabrication of ships of various descriptions.

143. If at present cheap electirc power is not available at Cochin or at Ernakulam, then until such time as cheap hydro-electric power is available, the company can generate their own power by use of liquid fuel which is already imported in this port from Berhein and where storage facilities have already been installed. We have recommended either Cochin or Ernakulam for the simple reason that the new works should be erected as near the port of Cochin as possible, so that the use of railway over a short distance and unnecessary loading and unloading charges might be eliminated. If this be not possible, the works might be erected at Ernakulam. Supply of labour in the Kerala country is quite adequate. If necessary skilled labour could be imported from the metal

industries which are being worked at Shoranur. The plant may also take up the manufacture of railway fittings and equipment required for the two railways in South India, just in the same way as Messrs. Guest Keen Williams Ltd. are manufacturing them in the North-East India.

144. The second plant, we suggest should be in Lahore (Moghulpura) in the Punjab and the supply of its raw material should be obtained from the Steel & General Rolling Mills which have been considered as one of the efficient units of the re-rolling industry in the country and which should be in a position to supply the required quantity of limit bars rolled to a special tolerance. Its proximity to one of the largest railway workshops in the country is yet another reason for its location there, because at this place too could be taken up the manufacture of railway tract fittings and other equipment which will also reduce considerably the overheads and consequently the cost of production at this plant.

145. In the event of small units of a capacity of 5,000 to 6,000 tons each being recommended as economic units for producing fasteners, then we recommend that one unit should be installed at Cochin, another one in Bombay, a third one in Hyderabad and the fourth one at Lahore. Our object in recommending Bombay and Hyderabad is that this store is particularly required for engineering, shipbuilding and industries connected with the manufacture and supply of railway equipment and structural workshops. Engineering and metals industries have already considerably grown in Bombay city and the Presidency. They are likewise growing in the Hyderabad State from where also they have the advantage of meeting the requirements of the markets in Central Provinces and Berar, Central India and the Northern Sirkars, including the port of Vizagapatam. Bombay city and the Presidency have a large building programme for construction of houses in industrial towns and also in agricultural districts. They have also ambitious road building programme requiring construction of bridges, etc. coming up. With a new shipbuilding industry, a small plant of a capacity of 5,000 tons or so capable of supplying locally manufactured fasteners at reasonable prices, will be a definite asset.

146. We have already explained our reason for installation of a plant at Cochin and another one in Lahore. At Hyderabad the development of this industry may be permitted to the Hyderabad Steel & Wire Products Ltd., who in their scheme submitted to us have indicated their desire to manufacture only about 2,000 tons of nuts, bolts and rivets. They should be allowed to augment their capacity up to 5,000 tons according to the increase in the demand for these products. In the event of our target being unable to cope with the demand from within the country, we suggest additional unit might be installed in the U.P. We regret it is not possible for us at this stage to recommend erection of any small scale factory in Central Provinces, Orissa or Assam which are industrially backward. As indicated above, our reason is that the bulk of the demand for fasteners stores emanates from the engineering and allied industries and for building construction. These provinces are essentially agricultural nor have they any building construction programmes of such a magnitude as planned by the Governments of Bombay and Punjab. Besides, the two large scale plants already existing in the country, one at Calcutta and the other at Jamshedpur are best situated to meet economically the requirements of these provinces. We are therefore of the opinion that at least during the first five years period of the Fifteen Year Plan, there is no possibility of constructing even small scale units for the manufacture of fasteners in these provinces.

147. In the course of our discussions with Messrs. Guest Keen Williams Ltd., we were informed that they were planning for the manufacture of wood screws in the country. We were also informed by Messrs. The Indian Steel

& Wire Products Ltd. that they too propose to set up a unit to manufacture this important item of hardware. Similar desire was also expressed by Mr. Rajam of the Indian Rolling Mills at Negapatam. This item of fastener stores requires considerable skill and precision in manufacture and we would, therefore, suggest that its manufacture should rest with those who are already experienced in the manufacture of fasteners. We have no adequate statistical data available to plan for its manufacture in the new plants which we have recommended for installation in other parts of the country. Definitely more information is necessary for the planning of this item of hardware and in the absence of which, we have no fresh proposal to make for its manufacture in units other than those which are already established in the country. From the scanty statistical data we have, it is estimated that the current requirements of the country are less than 5,000 tons and even if they increase by 100 per cent during the first phase of the Plan, the schemes which the existing manufacturers have in view would more than adequately cover the demand. So, at this juncture, we would not recommend others to take up the manufacture of wood screws which, as stated before, requires greater skill and precision in manufacture.

148. *State aid for the development of the Industry :—*

(a) *Supply of raw materials :* In recommending the location of new units, we have already suggested the sources of supply of limit bars to the new unit or units, which are to be installed. We feel confident that the Indian Steel & Wire Products Ltd. alone of all the producers of wire rods, would be in a position to supply the requirements of other manufacturers, though in the post-war expansion schemes of the primary producers, provision has been made for the manufacture of rods. To tide over the time lag which is bound to occur before these expansion schemes come into operation, the Iron & Steel (Major) Panel have recommended the manufacture of rods at the Ishapur Ordnance Factory. It is not so much for the supply of the processing materials to the new industry that Government's assistance would be required, but it is in respect of the supply of billets to the Indian Steel & Wire Products Ltd. and to Messrs. Guest Keen Williams Ltd. that Government will have to see that adequate provision is made to supply sufficient quantities of billets to these firms in order that the country's production of fasteners may be made in full.

149. When the re-rolling mills located at ports appeared before the Tariff Board, they submitted that they should be allowed to import billets freely in the event of the local supply not being available. It is, therefore, alleged that these producers have an alternate source of supply and that they should be made to import in the event of there being a scarcity of billets in the country, so that other re-rolling mills upcountry may draw on the indigenous production. Considering the very uncertain position in regard to import of billets from abroad, we regret we are not able to agree with those who desire that supply of indigenous billets be denied or be only partially made to the firms at ports, because they have an alternate source of billet supply from abroad. We consider fasteners to be a vital requirement of our Structural Engineering Industry and for the enormous building programme which is to be introduced all over the country. If these mills are not to be supplied with indigenous billets or if they are only to be partly supplied in the hope that they will be able to meet their requirements somehow from abroad and if as a consequence, these factories are to run partially or to remain idle, the country may have to go without her requirements of fasteners and her building programme would be delayed owing to a bottleneck arising out of short supply of fasteners. This unfortunately was India's experience during the war and it is imperative that this should not continue in normal times, when such vast schemes for social and economic well being

are to be enforced. Therefore, high priority will have to be give for the supply of requisite billets to the producers of limit bars in the country by the controlling authorities, who will be called upon to regulate the supply of billets to the various manufacturers, is indicated in the Second Report of the Iron and Steel (Major) Panel.

150. (*b*) *Cheap power:* We have not much to say in this connection. The places where we have recommended the location of these industries are in the main happily situated as far as supply of cheap electric power is concerned. The only case to which we would like to draw the attention of the Government is that of the Indian Steel & Wire Products Ltd. This company as indicated in the previous chapter, have an arrangement with Messrs. Tata Iron & Steel Co. Ltd. for the supply of cheap power. As the latter firm are now considerably expanding their activities and as they supply electric power to their own associated companies who are already working and as they intend to supply to the new ones who are likely to come into operation in the near future, authorities concerned must see to it that the supply of cheap electric power to Messrs. Indian Steel & Wire Products Ltd. is in no way curtailed.

151. (c) *Technical assistance:* The prospective manufacturers might require to send officers of their own staff for technical training abroad with firms from whom they propose to purchase their machinery and equipment. In such cases, we suggest that Government might facilitate employment of persons recommended by prospective manufacturers in such factories abroad, grant them passage priority and get them admittance to technological institutes where possible, as is being done by the High Commissioner for India in the U.K. and the Agent General in the U.S A. As the maximum number of factories recommended is limited to four, the employees who might be sent for technical training abroad would be small and should in no way inconvenience Government's arrangements for technical training of personnel for other industries.

152. In regard to the supply of skilled labour, arrangements might be made with Messrs. Indian Steel & Wire Products Ltd. and Messrs. Guest Keen Williams Ltd. to take a certain number of apprentices every year to be trained in the various processes of manufacture, so that they may acquire skill before being absorbed in regular employment by the prospective manufacturers in other parts of the country. For this purpose, as well as for the purpose of sending technical personnel abroad, a minimum education standard will have to be laid down, but this being a matter of detail, we leave it to the industry itself to fix its own standards.

153. (d) *Tariff protection:* This industry is a protected one. The protective duty leviable on nuts and bolts excluding fish-bolts and nuts is at present one and a half times the excise duty plus Rs. 1-9-0 per cwt. and the preferential duty on import from the U.K. is one and a half times the excise duty or 10 per cent *ad valorem* whichever is greater. On rivets the protective duty today is one and a half times the excise duty plus Rs. 1-14-0 per cwt. and the preferential duty on imports from the U.K. is one and a half times the excise duty or 10 per cent *ad valorem* whichever is higher. We are not required to indicate precisely the quantum of protective duties, but we submit that duties hitherto enforceable, should continue to remain in operation. We fear that in the immediate or near future, a large quantity of second-hand nuts and bolts, washers, etc. might be imported in this country at cheap rates, as very large surpluses are available from the various theatres of war. As the import of such nuts, bolts and rivets might affect the local production, Government might be called upon to take legislative measures either to increase the import duty or to prohibit import of such material on the submission of sufficient evidence by the Industry itself.

154. We consider the development of this industry very essential as an integral part of our industrial planning. During the war, when the Iron & Steel Mission from the U.K. and U.S.A. visited this country, the supply of fastener store was considered to be the worst bottleneck and we again stress the imperative necessity of preventing a recurrence. Therefore, considering all the circumstances, the Tariff Protection accorded to the Industry at present should not be disturbed and in the event of foreign manufacturers supplying their products at prices at which it would be uneconomic for indigenous manufacturers to supply, then the authorities concerned should examine the causes of the inability of the indigenous industries to compete with foreign products and accord them such assistance in the shape of protective duties, which might be considered suitable in the light of the evidence then tendered. Considering the price of basic steel prevalent to-day in the U.K. and U.S.A., we do not think that for sometime to come any attempt would be made to dump fastener stores in India.

155. (e) *Railway freight :* We have already indicated the intention of Messrs. Guest Keen Williams Ltd. to shut down their factory in Bombay and to transfer all the machines to be absorbed into their main plant in Calcutta. The principal reason offered by the firm for this is the high freight of Rs. 53 per ton chargeable on carriage of limit bars from Tatanagar to their factory in Bombay. We consider that the railway or steamer freight for despatch of materials from the manufacturers of limit bars to any part of the country should not be higher than the steamer freight chargeable from any port in a foreign country from where limit bars or fasteners manufactured therefrom could be imported into British-India or in any Indian State. Shipping freights have been so fixed by some of the maritime powers that they give virtually indirect protection to some of the industries, whose products are discouraged by a particular importing country. We have quoted the example of the sea freight of 21 shillings or Rs. 14-6-0 per ton chargeable on the import of bars from the U.K. to any major port in this country against Rs. 55 to say Lahore. These materials are brought over 5,000 miles by sea against 1,173 miles by rail. For a country like India which has at present little shipping of her own to carry her products to various countries at cheap rates and thus create markets for her industries, it is necessary to protect her industries at home, so that their development might not be thwarted by indirect encouragement given by foreign countries for the export of their products abroad.

156. (f) *Import restrictions :* In the case of this industry also, we feel that imports should be restricted to those required to balance indigenous production and to that extent licences should be issued by the controlling authority only as indicated in the previous chapter and by the Iron & Steel (Major) Panel in Chapter VIII of their First Report dealing with Control of Industry.

157. (g) *Control of Industry :* We have already indicated in paragraph 99 while dealing with the manufacture of wire and wire products in this country, the lines on which Government's industrial policy could be implemented in controlling prices, supply of basic material, output of the industry where necessary and its profit. In paragraphs 100 to 102 we have reiterated the necessity of selling cheap steel upon which so much emphasis has been laid by the Iron & Steel (Major) Panel. Manufacture of fasteners, particularly nuts, bolts and rivets is carried out today under protective tariffs. Consumers have borne the burden of these tariffs for well-nigh twenty years and it is high time that they were able to obtain their requirements at reasonable prices. We do not wish to analyse at length, the prices of other steel products whether manufactured by primary or secondary producers, the price of fasteners today are higher than those prevailing before the war. Then they were sold at Rs. 12 to Rs. 15

per cwt. when the price of billet was Rs. 198. It is not our duty to examine whether the industry was justified in charging these prices or not. A comparative study of other steel products will reveal that in no case has the price increased five to six times above the pre-war level. We therefore feel that the prices are high and that at the earliest opportunity, a proper enquiry by the Tariff Board or any such Government body should be instituted to ascertain the reasons for the high prices prevailing today both in respect of the basic steel and fasteners and to suggest means whereby they could be reduced.

158. In regard to the incidence of freight in relation to the build-up of price offered to consumers at various destinations upcountry, our recommendations in paragraph 104 should be made applicable in respect of this industry as well as Wire and Wire Products.

159. In regard to the control of the output of the industry, this has to be regulated again according to the necessities of the occasion. The controlling authority, who will issue licences for the creation of new plants will first have to satisfy themselves that the increase in the demand is such as to warrant the erection of new units and that adequate steps have been taken by the prospective *entrepreneurs* to obtain their raw materials. If for any reason, demand for these products does not come up to expectations in a particular region, then the unit in that region will have to curtail its production and the industry on the whole shall not be made to suffer. The existing units, which have built up their business by considerable sacrifice should be allowed to sell at competitive rates provided they do not cut down prices to an uneconomic level and sell even below their own production costs. Because of their financial resources, they should not be allowed to market their output at below cost in an attempt to kill competitions. Therefore in controlling output, if production is to be restricted, it should be localized in the area where the demand has fallen, provided manufacturers from outside the region are able to sell in that region at competitive prices, so that the consumer is not made to bear the unnecessary burden of maintaining an uneconomic unit.

160. In the same way, exports and imports of the products of this industry should be controlled. Permission for exports should not be granted until such time the demand within the country is fully satisfied and imports should be permitted only to the extent of balancing local production. The importer might in this case also be required to submit all statistical information to the Government or to the controlling authorities so that a record may be kept of the sizes and tonnage of the items not indigenously manufactured in order to encourage their manufacture in India, at as early a date as possible.

161. The last control which we consider essential for the sound development of this industry is, to see that the products continue to be manufactured to British Standard Specifications. This item of primary hardware must conform to the various tests and specifications laid down for its manufacture, because it performs a very important function in the construction of buildings, bridges, etc. In our opinion, great care will have to be exercised by the controlling authorities to see that the manufacturers adhere to these standards. For this purpose, Government will have to make proper arrangements for the examination of the products of this industry. It need not be on such an elaborate scale as at Jamshedpur. If necessary, the services of the Inspection Organization of the Indian Stores Department might be used for this purpose and a nominal charge may be levied for the industry to cover the cost of inspection.

162. Before concluding our remarks on the question of controls, we would submit that they should not be so exercised as to interfere with private enterprise

and its working of the various units under its management. We would reiterate that the control of the basic material, of output, imports and exports should not be made a permanent feature of our industrial structure. They are only necessary as long as a shortage of these products prevails, but as soon as limit bars and billets are available in adequate quantities and as soon as the producers are able to produce a surplus for external markets, then the controls would be unnecessary and should be withdrawn. Internal competition between various units should be permitted so as to bring about a healthy growth of the industry. However the question of prices should be under constant observation. Considering the quantity of fasteners to be supplied in the country, we do not think it necessary to make any specific recommendations regarding marketing. If the various units in the industry desire to market their products independently, we see no particular objection in their doing so, as long as no attempt is made to discourage other manufacturers by unfair competition. Similarly, we have no objection to the various units in the industry arranging to sell through the same marketing organization provided that by so doing they do not create monopolistic conditions and offer their products at prices which might deny to the consumer the benefits of cheap steel products.

163. For the purpose of marketing the products of this industry abroad, it would be desirable if they were marketed through one central selling organization. We would, for this purpose, recommend that the services of a Central Marketing Organization as recommended by the Iron & Steel (Major) Panel for the products of the basic industry should be utilized, as it would prevent foreign purchasers from playing off one supplier against the other and would enable the industry as a whole to obtain the best possible prices. Again the units proposed being small, they may not have financial resources which would be at the disposal of Central Marketing Organization.

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CHAPTER V

BUILDING AND DOMESTIC HARDWARE, CUTLERYWARE AND ALLIED PRODUCTS

164. Building hardware is manufactured all over the country on small and cottage industry scale. Before the war, Japanese competition was keen but despite this, the industry has made some headway particularly in the up-country towns and villages, where hinges, door bolts, latches and other door and window fittings, locks and padlocks have been produced in large quantities. Its development received considerable impetus during the war as a result of increased demands by the Supply Department and by the virtual cessation of imports. The quality and output improved and increased considerably as the supplies had to be made to Ordnance Inspection Specifications, which are rigid in respect of dimensions, durability and finish. Unfortunately no statistical data is available about the production of this type of hardware.

165. The production of these products in large scale factories has also been undertaken by two to three firms in Bombay and Calcutta, of which the most noteworthy is the Acme Manufacturing Co., Ltd. of Bombay. This firm manufacture high grade door, window and other fittings.

166. It is anticipated that the demand for building hardware will be on a considerably larger scale in the post-war period than hitherto, owing to the large scale building programme, which has been prepared by various Provincial and the Central Government departments. The importance of the latter can best be visualized when in the Punjab alone, according to the Report of the Provincial Town Planning Officer, it will be necessary to spend about Rs. 300 crores to meet the housing needs of the people in the urban and rural areas of that province during a period of 20 years and when it will be necessary to build about 33,500 houses per annum throughout the province for 20 years and an additional 33,500 houses for five to seven years to make good the deficiency arising out of more or less complete cessation of civilian building activities during the war. This estimate has been based on the previous censuses and does not take into account the accelerated rate of industrial growth, which is envisaged in the post-war industrialization of the province. If an agricultural province like the Punjab is to have a building programme of such magnitude, it is not difficult to imagine what the requirements would be in other industrial provinces and large towns like Bombay and Calcutta. In the latter case, according to the census of 1941, the population increased to 2,190,000 from 1,460,000 recorded during the census of 1921. At the time when Food Rationing was introduced late in 1943, Ration Cards were issued to more than 4,100,000 people. This increase in population was due partly to evacuation of Burma and partly due to Calcutta becoming the biggest supply base for the defence services in the eastern theatre of the war. Nevertheless a substantial portion of this population will remain in Calcutta having found means of livelihood there and the town authorities are already considering building schemes to house this additional population.

167. We therefore feel that the development of this industry should receive the careful attention of all Provincial and States authorities and their Directors of Industries. We are recommending the lines on which the latter should act so that small industries for the manufacture of this important item of hardware may be developed, all over the country.

168. *Locks and Padlocks :* This industry has been in existence in the country for well-nigh half a century and is particularly localized in the Aligarh District of the U.P. Locks and Padlocks are also manufactured as a small scale industry in some parts of the Punjab, Bombay, Madras and other provinces. Even the complicated Yale type locks have been manufactured by firms of repute like Messrs. Godrej & Boyce Manufacturing Co., Ltd., Alwyn & Co., Ltd., etc. This industry also developed considerably during the war, when the import of cheap locks and padlocks of German and Japanese manufacture ceased and the Supply Department purchased large quantities of this store. The main source of supply was the Director of Industries, U.P. under whose aegis, this small scale industry in Aligarh was properly organized. The productive capacity was estimated at 125,000 locks per month which could be stepped up to 200,000 locks per mensem. The sizes purchased were standardized and conformed to the specifications laid down by the Ordnance Inspection with the result that the quality and output of this industry improved considerably.

169. *Domestic Hardware :—*

Cutlery and allied products : The Cutlery Industry has been known to exist in this country as a cottage industry from time immemorial. Ranade in his Essay on Indian Economics, states :

> " The Iron & Steel Industry not only supplied all the local wants, but it also enabled India to export its finished products to various countries. The quality of the material turned out had also a world-wide fame. Indian wootz steel furnished materials out of which the Damascus blades with world-wide reputation were made and merchants in those old times travelled all the way to India to obtain these materials and export to Asia. *The Indian steel found once considerable demand for cutlery even in England.*"

170. Since the formation of Departments of Industries in various provinces, some attempts have been made to establish small scale industries which included the cutlery cottage industry. The production mainly consisted knives of various kinds including choppers, etc., spoons and some farm implements. Spoons and forks have been cast in large numbers in Moradabad in the U.P. and knives etc. have been made in the Punjab at Nizamabad, Wazirabad and Lahore.

171. *Moradabad cutlery :* Moradabad spoons and forks are cast from a low grade nickel-silver for which the main source of supply was from the spent bullets used for practising at different cantonments. The pre-war price was extremely low, tea spoons at about 0-6-0 per dozen and dessert-spoons at 0-12-0 to 1-0-0 per dozen were sold with some sort of silver plating. This is the one place which kept out Japanese spoons and forks although they were made on die casting machines in millions. Nizamabad and Wazirabad made knives and could produce a fair quality dessert-knives for Rs. 1-8-0 per dozen.

172. Most of the knives were made from low grade carbon steel scrap. Stainless steel was not available indigenously nor was the technique of working the stainless steel known. The price of imported stainless steel was kept high because of the International Steel Cartel. To add to these difficulties, the duty on imported stainless steel bars was about 20 per cent and on cutlery only 25 per cent, which left a very small margin for the manufacturers in this country. In spite of these difficulties, some headway was made before the war in the production of stainless steel cutlery by the Metal Industries of Lahore who have a well equipped and suitable plant. The difficulties experienced by this firm were many. An expert was brought from Sheffield, who refused to work and left after two months, putting the firm to an unnecessary expense. The

firm then started training the men here who were able to produce cutlery of good quality in about two years. This had been done as they could not be certain of bringing out another man from Sheffield with a guarantee of staying and training the labour here. The firm was producing cutlery and could compete against the imported cutlery before the war. The capacity of the firm is about 500 pieces per day and the range consists of all types of cutlery including knives, forks and spoons and of stainless steel nickel-silver and solid silver. This firm never asked for any tariff protection and they propose to extend their capacity by putting in a Balancing Plant to achieve further economy in production. This was the only civil firm who produced a large number of bayonets during the war besides Kookries, Fighting Knives and Dahs. All these articles were formerly produced only at the Ordnance Factories which were not able to cope with the war time demands.

173. With the arrival of a large number of British and American troops in the country and with the raising of a volunteer army of 2½ million men, everyone of whom used a spoon at least and about a hundred thousand officers whose messes and personal luggage were equipped with the dinner-table requisites, the demand for spoons, knives, forks, fish-eaters, etc. greatly increased. With the return of these soldiers to civilian life, it is reasonable to assume that the habit of using cutleryware will be retained by them and spread to their families and friends with a reslutant increase in demand.

174. *Safety Razors:* During the war, a few razors were made for the Department of Supply. They were expensive and not of very good quality and it is feared that this side of the cutleryware industry is now dead in view of the very cheap and attractive plastic razors now being imported. The manufacture of razor blades presented a very difficult problem and unless some firm is in a position to roll the strips, it will not be possible to produce these in this country. In any event, it is doubtful whether India would be able to compete against other countries where blades can be produced at a price as low as two for a pice. The capital expenditure involved is heavy and considerable technical skill is required.

175. *Current output:* It is difficult to assess the current output and value of building and domestic hardware that is being manufactured in this country, because production is carried out in large, small and cottage scale plants and statistical data is meagre as the bulk of the production is obtained from small and cottage scale plants. There is however reason to believe that the bulk of the materials consumed in this country are now manufactured locally. At the same time, it will be seen from the following Table No. 7 that during the period 1935-40 the import of hardware excluding electroplated-ware and such items as bolts, nuts, screws, rivets, wire and wire products (protected and non-protected) was considerable.

TABLE No. 7.

Import of Hardware—1935-1940.

(Excluding Cutlery electroplated-ware, bolts, nuts, rivets, wire and wire nails—protected and non-protected).

Description	1935-36	1936-37	1937-38	1938-39	1939-40
1. Builders Hardware such as lock, hinges door-bolts, etc.	28,29,790	22,65,006	32,41,631	30,44,511	22,16,440
2. Domestic Hardware other than enamelware ...	9,82,836	10,56,323	9,14,879	9,50,952	5,42,081
Total ...	38,12,626	33,21,329	41,56,510	39,95,463	27,58,521

Source:—**Statistical Abstract of the Seaborne Trade of British-India.**

176. Because the bulk of the hardware as stated above is now produced in the country, it does not follow that expansion in its production in the post-war period is not necessary. Indigenous manufacture *plus* imports have been able to meet the normal requirements of the country. But during the post-war period, we have not only to meet a substantial portion of the demand which has been denied during the last sixty years, but also the expanding needs of the various industries whose development is being planned now, and of the building trade. Again, if the small scale manufacturers are given technical assistance in the manufacture of these products, if measures are taken for their standardization and for their manufacture according to prescribed specifications and if assistance in the shape of organized marketing is given, then there is a definite future for the products of these industries in markets east of Suez.

177. *Target of production :* There being no statistical data available to ascertain the indigenous pre-war production of building and domestic hardware, it is well-nigh impossible to lay down a target of production for this industry. Figures are available about the imports of these products and from the Table No. 7 above, it will be seen that during the quinquennium 1935-40, building hardware such as door hinges, hasps and staples, door-bolts, etc. were imported into British India at an average value of Rs. 25 to 30 lakhs per annum. Similarly, domestic hardware of an average value of about Rs. 9 to 10 lakhs was imported per annum. The average import of cutleryware was valued at Rs. 25 to 30 lakhs per annum, but this is partial information and without actually knowing the quantity or value of the products manufactured in the country it is difficult to state what new productive capacity should be created. The import figures only indicate that there is still room for further developing production in this country, but in view of the enormous building programme which all the provincial governments have planned and in view of the equally enormous construction of buildings on private account, any attempt to fix the target without knowledge of their requirements, would make our estimates wide off the mark and would not be even worth considering. We had no occasion nor the time to examine the building programmes of the provincial governments so as to make an estimate of the demand for building hardware. Even if we had obtained information regarding the requirements of the construction schemes of the various provincial governments, our assessment would still have been wide off the mark because of the inability to measure the requirements of private parties. If not impossible, to collect such information in a country of the size of India, would involve considerable time, labour and expense and therefore, we suggest the development of this industry be taken on lines indicated hereunder.

178. We suggest that small units for the manufacture of building hardware should be located in all provinces and major States. We suggest that the Director of Industries or such of the officers of the provincial or State governments, who are entrusted with the task of sponsoring the development schemes, should form a committee of architects, engineers, suitably qualified officers from the P.W.D. and representatives of such bodies as the Chamber of Commerce together with a few well-known building contractors. This committee should examine the schemes of the provincial governments, district and local bodies, municipalities, etc. and if possible also ascertain from private individuals by notification to the Press, particulars of any building construction that they have in view for erection during the period of five years. Having done so, they should prepare an estimate of the types of fittings and building hardware that would be required for the various types of houses to be constructed. They should then attempt to standardize requirements, prepare drawings of the type of hardware that would be required and work out specifications so that standardized products of sufficient strength and quality could be utilized throughout

the province. As a matter of fact, the Industries & Supplies Department of the Government of India, with a view to manufacture building hardware at the various Ordnance Factories in the country, formed a representative committee on these lines, after consulting eminent architects and engineers in the country, so that any bottleneck for want of these products may not retard the future building programmes. Though we do not approve of the production of building hardware in Government Ordnance Factories, we consider the method of approach in meeting the post-war heavy demand for building hardware to be sound and suggest that all provincial and State governments should work on the same lines. The type of machinery and presses required for this purpose are simple in design and operation and they can be installed in any town where cheap power and skilled labour are available.

179. In regard to the superior quality of building hardware required for up-to-date and modern buildings for industrial and commercial purposes, for hospitals, universities, higher educational institutes, etc. and for high class modern residential premises and bungalows, we suggest that two more factories of the type which Messrs. Acme Manufacturing Co., Ltd. have established in Bombay would be sufficient to meet the requirements for such superior quality hardware in other parts of the country. In our opinion, one of these should be erected in Bengal and the other in the Punjab. It is unnecessary for us to suggest the precise location of these factories. We leave it to the prospective *entrepreneurs* and the Government of the provinces concerned. We do not think at this juncture, there is any necessity for a plant of the type suggested being erected in South India, because we feel the existing factory in Bombay and another one if it comes into operation in Bengal, would be able to meet the requirements of the Southern Presidency and of the Indian States adjacent to it. In case any firm desires to set up a plant for the manufacture of this type of hardware for the export markets, the construction of such a plant should be encouraged in a major port preferably Bombay, from where shipments could be despatched to all the countries east of Suez.

190. What we have stated above also applies to an equal extent to the manufacture of cutleryware. Cutleryware has so far mainly been manufactured in some of the districts of the Punjab and U.P. where for generations, skilled craftsmen have been employed in its production. The only large scale factory, producing cutleryware of a very superior quality comparable to the best obtainable anywhere, i.e. The Metal Industries, Lahore is also situated in this province. There are other provinces besides, where cutleryware particularly knives, have been manufactured. There are some small factories in the ports of Calcutta and Bombay and the metal industry at Shoranur and the adjacent districts in South India is also well known. In the circumstances, we do not feel any justification for the manufacture of cutleryware being localized in a certain area.

181. In a previous paragraph, we have already indicated the increase in the use of cutleryware in the army during the war, when every Indian soldier in a volunteer army of 2½ million men was provided with a spoon at least and about a hundred thousand officers' kit and their messes were equipped with dining table requisites. These men who joined the army from various provinces will return home and where possible will encourage the use of cutleryware in villages and small towns, where it is not used to the extent it should be. This coupled with the improvement in the standard of living and improvement in education, is bound to create a substantial demand for cutleryware and there is no reason why their production should not be taken up in factories in various provinces. In the ensuing paragraph dealing with Government assistance, we propose to suggest certain measures in order to standardize quality and

output and offer technical assistance to small manufacturers to keep their plants in efficient working condition and we feel confident that cutleryware of serviceable quality at reasonable prices will be made available to the consumers in the country.

182. We also feel that for the manufacture of superior quality cutleryware, two more factories should be established, one in Bombay and the other in Bengal. Our suggestions might perhaps not meet the approval of people interested in the industrial development of other provinces, but the reason which has prompted us to suggest two new plants of the type of Metal Industries, Lahore, in Bombay and Bengal is that these two provinces today are industrially most advanced and contain the largest population of the class, who are the usual buyers of cutleryware of a superior quality. In no other province will the number of such persons be adequately large enough to warrant the construction of such plants in the immediate or the near future. Again, considering the prices at which foreign cutleryware is marketed in India, we feel that these two factories in the ports should be in a position to export their products to markets east of Suez. We do not for a moment, desire it to be conveyed that we are averse to the establishment of such factories in other parts of India. We, however, feel that in the immediate or near future their location in these two provinces would best serve the needs of the public and also help to develop export markets.

183. *State Aid :* Manufacture of domestic hardware and cutleryware has been carried out mainly on a cottage scale basis and as such its development should become a subject of close supervision by the Department of Industries in the various provinces and States. We have already indicated the lines on which the authorities in the various provinces should arrange for the supply of this type of hardware. If the cottage scale industry in the various provinces is to supply the building hardware required for the buildings and tenements to be constructed for the working classes and for people constructing buildings on private account with small financial resources, then it should also be the responsibility of the Government, to see that suitable basic materials of the right quality are made available to the cottage industries at reasonable prices, so that hardware of standard quality is available for the building programme of people with limited means. Provincial Governments will have to consider some scheme of co-operative buying, which may be put up in a particular province by those interested in the manufacture of domestic hardware or, the Industries Department may have to take upon itself the responsibility for purchasing in bulk the basic materials from the primary producers and distribute them among the various manufacturers charging nominal fees to cover the cost of distribution.

184. Our object in making this proposal is to protect the cottage industry from being exploited by middlemen who, taking advantage of the indebtedness of the small scale manufacturer, compel him to buy the raw materials at a considerably higher price and take away his finished product at a price which would provide him with bare means of subsistence and keep him perpetually under the bondage of the middlemen. We are quite aware that the Governments of Provinces and States have already made some progress in this direction and we would urge them to take similar measures for the development of this industry as well, so that its products may be marketed at reasonable prices and at the same time enable the small scale industrialists to make the most of its talents, equipment and labour. For the same reason, we would impress upon the Provincial Governments the necessity to form a Marketing Organization of the Industry or form an Association of small scale manufacturers to give

them the benefits of co-operative marketing. During our discussions, Mr. Quereshi, lately the Director of Industries, Punjab emphasized that a uniform procedure might be considered by the Department of Industries in the various provinces and States in order that the Industry may be developed on certain well-defined lines and on an all-India basis and so that its various problems may be uniformly treated throughout the country. For the development of the Surgical Instruments Industry, the Punjab Government have taken over from the Central Government, the organization which was set up for the control of this Industry during the war and converted it into a Surgical Instruments & Allied Products Development Centre. In Chapter No. VIII, we have described the functions, which in our opinion should be performed by this organization and we would like that all the Provincial Governments interested in this industry should form an organization attached to the Department of Industries to work on similar lines, so that this cottage industry may develop on sound lines.

185. *Supply of Power :* In regard to supply of electric power, we have no particular recommendation to make, as we think that cheap power will be available in all provinces and States for industries to be carried on cottage scale basis, at least in large towns. In respect of the larger units, which we have recommended for construction in the two Presidencies, there should again be no difficulty as adequate electric power is available.

186. In regard to technical assistance, we feel that the Department of Industries should engage the services of technically qualified supervisors with practical knowledge. These supervisors should go out to the various factories, examine their machinery and equipment, advise and guide the manufacturers in their up-keep and maintenance, and also demonstrate to them efficient and correct methods of handling the raw material and operation of their machinery. We feel that only by engaging the services of such technical supervisors could a proper check be maintained on the quality of the basic material and the finished products.

187. As the small scale industrialists would always be handicapped for want of up-to-date and expensive machine tools, we recommend that a Central Workshop be created and located in such a part of the country, from where it would be in a position to supply dies and machinery parts of standard quality to the small scale manufacturer. We attach considerable importance to this as it has been suggested to us by some large scale manufacturers of hardware that the country's material resources should not be drained away by allowing indiscriminate manufacture of low quality goods, by people who are ill-equipped to turn out goods comparable to those manufactured in a up-to-date and automatic plant. If it is thought advisable by large scale manufacturers like Messrs. Guest Keen Williams Ltd. to bring under one roof, the expensive machine shop which is required for manufacturing dies and other parts required for the automatic machines, it is equally important that a small but properly equipped workshop should be created for the benefit of the indigenous small scale manufacturers who could not afford to establish one of their own. The establishment of such a workshop coupled with skilled supervision of the manufacturing processes by technically qualified men would immediately raise the standard and quality of the output of this Industry which is so very essential to put the industry on sound footing and also for developing the export market.

188. The Government of India might consider the possibility of locating such a workshop in one of the Ordnance Factories at Kanpur or at Jubbulpore or both. This in turn would lower the incidence of overhead charges as such a workshop would form only a small department in the Ordnance Factories. In the early stages, it may not be found profitable to work such a Central Workshop, but once its utility is recognized for the development of small scale

industries besides the one with which we are dealing, we are sure that the demands on such a workshop would be such that it would result in further economies in supplying the machinery and machine parts to the small scale industrialists everywhere in the country. We would, therefore, like the Government of India and the Provincial Government concerned to give this matter very careful thought. Upon some such arrangement will depend very largely the successful growth of the small-scale industry in the country.

189. We do not think any State assistance is necessary in the shape of tariff protection or concession in railway freight but the volume of imports should be carefully watched by the Government. As we have pointed out, the small-scale manufacturers particularly of cutleryware and locks, were able to produce before the war, goods which compared favourably with those coming from Japan. We feel that for some time to come the prospects for large scale imports of domestic hardware and cutleryware are remote and as such the occasion has not yet arrived to consider the question of affording tariff protection to this industry. In case such imports materialize earlier, the door is always open to the industry to approach the Tariff Board and establish a case for protection. We are confident that any such application will receive the immediate attention of that Board, who had already considered the applications of other small scale and recently developed industries.

190. *Control of Industry :* In our opinion, the control of industry in the form it is applied is not necessary for the future development of this industry. What is necessary is technical guidance, supply of raw materials of quality and at reasonable prices and standardized equipment and machine parts at the units of production throughout the country. Price control of any nature is not necessary. The goods being manufactured on cottage scale will cater for markets in areas within small distances. Healthy competition among manufacturers would be desirable so that the manufacturers will try to maintain that degree of efficiency which would enable them to retain their customers. Free imports of the products of these industries will in no way affect the local production, so long as goods of serviceable quality are produced at reasonable prices. In our opinion, foreign imports under the present circumstances, will only serve to supplement local production as foreign goods are offered to-day at much higher prices than those indigenously manufactured and this condition is likely to prevail for some time to come at least during the first phase of the Plan.

191. The only check necessary to prevent any deterioration in quality is to see that raw materials of proper quality, standardized equipment and machine parts are supplied to the factories and proper inspection is maintained. This should be in the form of an aid to the industry and not as control. It will be for the Provincial and States Governments to see that the fullest advantage is taken by the industry of such assistance as we have suggested above. It is only when the industrialists ignore the advantage accruing to them from standardization of production and attempt to revise the quality of the output, control in some form or other should be contemplated. In such a case, we would suggest that Provincial and States Governments should take some action of the sort which is being taken by the Government of the Punjab in the development of the Surgical Instruments Industry, about which we have commented in Chapter No. VII.

192. We feel that for the development of this and other small scale industries, it would be advantageous for the Directors of various Provinces and States meet together at least three to four times a year to discuss problems of standardization, improvements in manufacturing technique and questions relating to marketing, etc. This exchange of views would be of considerable value in

the development of this and other industries. An association of manufacturers of these products might be formed in each of the Provinces and States and through them, the various fabricators in the country might be approached for information which the Directors of Industries may have collected about the industry in other parts of the country. This free exchange of views in solving the various problems pertaining to the industry, would in the long run assist the attainment of uniformity of production throughout the country and enable the industry to turn out products of good quality. Any such voluntary organization of industry, would in our opinion, achieve better results than any form of control.

193. We are also of the opinion that no centralized marketing organization for domestic hardware and cutleryware is necessary. In regard to export markets, the reports of our Trade Commissioners in the adjacent countries indicate the export of domestic hardware and cutleryware would be very welcome. In our opinion, this should be attempted only after indigenous demand is satisfied. It will be necessary for the Department of Industries in various provinces to consider methods of marketing when such exportable surpluses are achieved, and they have to decide whether the same is to be marketed through the large merchant houses in the ports, who will take good care to see that products of good quality attractively and properly packed are despatched abroad, or alternately, they may have to form their own selling organization. We consider it is essential for the development of our export trade that one or the other alternative methods of export selling is adopted. We hope that the authorities concerned will encourage organized marketing immediately exportable surpluses are available.

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CHAPTER VI

HOLLOW-WARE AND ENAMELWARE

194. Metal Pressing, Processing and Welding Industry in India was established before the war for light and medium pressings required in the manufacture of utensils for domestic use and even for medium and large containers for industrial use. There is hardly a single bazaar in India to-day not supplying tin utensils commonly used in Indian households such as buckets, bath-tubs, etc. These are mainly hand-made with the traditional skill handed down by generations. During the war, heavy pressings or " hot pressings" were produced by some firms of structural engineers in Calcutta and Jamshedpur at the request of the Armoured Vehicles Directorate for pressing armour plates into shapes. The development of the hollow-ware industry has been such that almost any type of utensil or container can now be manufactured indigenously.

195. *Containers for petrol, lubricants and other mineral oils :* During the war, owing to a considerable number of tank wagons for petrol, lubricants and other mineral oils being required for defence services, it was necessary to despatch these oils upcountry in sufficiently large size containers and drums which could be loaded into an ordinary goods wagon or cargo-boat. Consequently, large scale production of two-gallon and four-gallon welded steel petrol drums was taken up by various oil companies distributing petrol and mineral oils in this country. Messrs. Burmah Shell Oil and Distributing Co. Ltd. have their own installations at Bombay, Calcutta, Marmagoa, Madras, Ernakulam, Cocanada, Karachi and Chittagong and their monthly output of kerosene containers is 1,373,200 four-gallon tins and 32,000 two-gallon tins. The Assam Oil Company's installation at Digboi produces 390,000 four-gallon tins per month. The Attock Oil installation at Rawalpindi manufacture 2,000 one-gallon tins, 4,800 two-gallon tins and 6,100 four-gallon tins per month. The Standard Vacuum Oil Company's installations at Calcutta, Bombay, Marmagoa Ernakulam, Cocanada and Karachi produce 619,770 four-gallon tins and 9,800 one-gallon tins. Thus, the total monthly Indian production of these mineral oil containers comes to approximately 133,230 one-gallon tins, 36,800 two-gallon tins and 2,339,070 four-gallon tins.

196. Besides the oil companies, indigenous paint and varnish manufacturers in Calcutta and Bombay utilize locally manufactured drums and Messrs. The Indian Galvanizing (1926) Ltd. and Messrs. Barry & Co., Managing Agents of Jenson & Nicholson (India) Co. of Calcutta also manufacture their own drums. A very large demand also came up form the D.G.M.P. who purchased large quantities of four-gallon and other drums and lubricating oil cans. These were purchased from companies who will continue to function during the post-war period as a large volume of these containers will still be required for the despatch of vegetable oils, the production of which has been planned on a very large scale.

197. *Containers for food products :* Containers for food products have been manufactured by tinsmiths all over the country, but the production of these on a large scale basis was first undertaken by The Metal Box Co. of India Ltd. This company started operations in India in 1933 with a capital of Rs. 10 lakhs. The original factory was installed in Calcutta. Within two years, a small factory was opened in Bombay in 1935, to meet the growing demands for

containers in that city, which could not satisfactorily be served from Calcutta owing to the incidence of heavy railway freight. Both the Calcutta and Bombay factories continued to expand and in the year 1940, a new and greatly enlarged factory was built in Bombay.

198. At the outbreak of the war, this firm employed approximately 900 workers in its two factories, which number increased to 4,000 in 1943, which was the peak year for supplies to the Defence Services. In 1944, the company opened a factory in Okara in the Punjab for the supply of food containers manufactured on the first fully automatic high-speed can production unit ever to be installed in this country. Since the cessation of hostilities, further factory expansions have taken place and the company have made plans to install a fourth plant in South India as a part of their Post-war Development Scheme.

199. The company is associated with The Metal Box Co. Ltd. of London, The Continental Overseas Corporation of America, The Southern Can Company of Australia, The Metal Box Co. of Africa Ltd., Messrs. Thomassen & Drijver, Holland, S.A. Sobemi, Belgium, etc. These world-wide connections have made it possible for the company to incorporate the latest developments in the manufacture of containers, by pooling of technical knowledge and ensures adequate supplies of tin containers for the packing of a wide range of product at low prices, by utilization of modern high speed machinery. The quality and the output of the firm are comparable to that manufactured in any foreign country. The contribution of the company to the economy of the country can well be measured by the fact that consumer goods to the value of approximately Rs. 15 crores are packed in containers produced by the company for more than 300 industries employing an estimated labour force of about 50,000 workers.

200. During the war, more than 80 articles of munitions and components for Munitions and Aircraft Directorates were manufactured in the company's factories. Their most valuable contribution was in supplying millions of tin containers for packing army rations, powdered milk, butter, cheese, margarine syrups, coffee, condiments, tobacco, camouflage creams, lubricating oils, etc. The company also manufactured eyelets for army boot, metal components for webbing and canvas equipment and their production ran into millions. Their factory at Okara has a capacity to manufacture about 20 million tin containers for canned food and given cheap tin-plate, there is every possibility of this factory in the agricultural province producing the cheapest containers for packing canned foods and as such would give considerable help to canned food marketing which is being planned on an extensive scale by the Governments of the Punjab and the Frontier Province, as part of their Post-war Development Schemes.

201. The importance of this industry to our national economy can well be measured by the list of products packed in containers manufactured in this country as given in the following Table No. 8.

TABLE No. 8.

Abrasives
Adhesives
Asafoetida

Barley, Pearl Powdered

Biscuits
Blanco
Brilliantine, Solid
Butter

Cakes
Canned, Fish
 „ Fruits
 „ Meat
 „ Paste
 „ Vegetable
Chyaranaspras
Chemicals
Cigarettes and Tobacco
Cocoa

TABLE NO. 8 (*Contd.*)

Coffee
Condiments, Curry Powder
,, Mustard
,, Pepper
,, Salt
Confectionery
Cornflour
Crayons
Cream, Antimosquito
,, Camouflage face
,, Ice

Dentifrice, Solid
Disinfectant, Germicides
Distemper
Dubbin
Dyes

Enamel

Films
Flux

Ghee
Glucose
Gramophone needles
Grease

Honey

Ice cream
Insecticide, Liquid
,, Powder
,, Sprayer

Jam

Kaolin

Lard
Lighter Fluid

Malt Extract
Mantles
Margarine
Mathematical Instruments
Milk Baby Food
,, Condensed
,, Malted Powdered
,, Powder

Oats
Oil Brake
,, Castor
,, Cod Liver
,, Edible
,, Motor
Oil Mustard
,, Olive
,, Salad
,, Shark Liver
Ointments

Paint
Petrol
Phenyle
Pills and Tablets
Plaster of Paris
Polish Boot
,, Liquid
,, Paste
,, Wax
Powder Clarifying
,, Custard
,, Deodorant
,, Foot
,, French Chalk
,, Prickly Heat
,, Talcum
,, Toilet
,, Tooth
,, Wheat Products

Rouge

Salt, Health and Liver
,, Cooking
Snuff
Soap, Cakes
,, Liquid
,, Shaving stick
Solution Rubber
,, Vulcanizing
Soup, Canned
,, Compressed
,, Powdered
Spectacles
Stamp Pad
Starch
Strychnine
Syrup Golden

Tablets Ink
Tea
Tins Ration
Typewriter Ribbons
Tyre Repair Outfit

Vanaspati
Varnish
Vaseline

Water Colours

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202. We have already indicated approximately the current productive capacity of the principal manufacturers of containers both for the storage of fuel oils, mineral oils, lubricants and for foodstuffs, chemicals, etc. In our opinion, no useful purpose will be served by attempting to give accurate figure of the output of all containers in this country.

203. In addition to the principal important manufacturers there are numerous others throughout the country. Some of them have been established for a considerable number of years, and others have developed during the war period due to the increase in demand for containers at a time when the output of the larger manufacturers was almost exclusively devoted to production for the Supply Department.

204. Below is given a list of some of the other manufacturers of hollow-ware and tin containers :—

Bengal.

(1) Metal Decorating & Shaping Co., Ltd., Calcutta.
(2) Dhur Tin Factory, Calcutta.
(3) Ganga Tin Factory, Calcutta.
(4) Hind Tin & Metal Crafts Ltd., Calcutta.
(5) The Bengal Tin Box Manufacturing Co., Calcutta.
(6) Calcutta Can Manufacturing Co., Calcutta.
(7) Messrs. Colour Printing & Hollow-ware Ltd., Calcutta.
(8) Messrs. Gajanan Rampatram, Calcutta.
(9) The National Sheet & Metal Works Ltd., Calcutta.

Bombay.

(1) Messrs. Rajabally Alibhoy, Bombay.
(2) Bombay Tin Printers, Bombay.
(3) Zenith Tin Works, Bombay.
(4) New Jack Printing Works Ltd., Bombay.
(5) Modern Tin Works, Vile Parle, Bombay.

Punjab.

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(1) Delhi Tin Printing Works, Lahore.
(2) Metal Sheet Printing & Mechanical Mills, Shahdra, Lahore.

Delhi.

(1) Delhi Tin Printing Works, Delhi.

205. It is known that a number of these companies are planning substantial extensions to their activities, and it is felt that there will be excellent scope for their development.

206. In addition to these manufacturers, a number of packers do manufacture their own containers. Under this heading is included cigarettes and tobacco, ghee and vegetable oil, some paint and varnish manufacturers, some biscuit manufacturers and others.

207. In the past, this has been necessary, particularly in cases where there was no established container making industry or where the packing factory concerned was at a very considerable distance from an established tin box manufacturing plant where the incidents of railway freight would make the cost of containers prohibitive.

208. In our opinion, we do not consider it desirable to establish auxiliary plants for the manufacture of containers by various industries, particularly by the manufacturers of edible products, except as standby units to be utilized in

cases of emergency, when the large scale manufacturers of containers are unable to supply them, due to circumstances beyond their control. On such occasions the auxiliary plants might fabricate containers so as not to dislocate production at factories where they are needed. The price policy pursued by the large scale manufacturers of containers for public consumption is such as to discourage setting up small units at the factories of the customers. So long as these customers are able to obtain their products at cheap prices which would dissuade them from using their own units, we feel that the scope for setting up such units is limited being restricted to emergency only. We have, therefore, considered it inadvisable to make any attempt to increase the current output and capacity of such small plants.

209. *Target of post-war production:* In regard to the manufacture of containers for the storage of lubricants, fuel oils, etc. it may be stated that the principal use for which these containers are produced in the country is for packing kerosene oil which has a market in every village in India. With the introduction of hydro-electric schemes all over the country and with the availability of electric power as a cheaper substitute for domestic lighting purposes, etc. it is anticipated that the consumption of kerosene oil in the country may decrease. To that extent, it may also diminish the consumption of tin cans necessary for the purpose, unless other uses of kerosene oil are found out which may sustain the high level of consumption to-day or even increase it. At the moment, such usages are not known as to warrant a substantial increase in the output of containers for these purposes. Provided that raw materials are available (see separate para on availability) and in the event of it being necessary to augment their output, the oil storage and distributing companies which are the principal manufacturers of containers for these purposes, will themselves look after the expansion of their plants. We do not think that any national planning is required for the purpose, as long as such tin containers are manufactured in the country from materials locally manufactured with the help of indigenous labour and technical staff.

210. In regard to the containers, required for purposes other than those of packing fuel, mineral and lubricant oils on a large scale, their post-war development has to be measured in terms of consumption of tin plates and its substitutes, rather than in the production of various kinds of cans and containers that would be necessary for the post-war period. In assessing the target of production, we are guided by the information made available to us by Messrs. The Metal Box Co. of India Ltd., who have surveyed all the possible uses of cans and containers in the post-war period and have planned their production on the basis of information which they have collected.

211. Their estimate of overall tinplate consumption is as follows:—

Immediate	90,000 tons per annum.
1950	110,000 „ „
1955	130,000 „ „
1960	150,000 „ „

The immediate figure is made up as follows:—

(a)	Oil companies' requirements (Kerosene oil) ...	40,000 tons
(b)	Metal Box Company	20,000 „
(c)	Tea Trade (for tea chests linings and case bindings)	2,500 „
(d)	Other container manufacturers including packers making their own containers	27,500 „
	Total ...	90,000 tons

212. We would stress that the above figures represent accurately estimated requirements but, as we shall show, later these have to be scaled down to the tinplate company's maximum output of 70,000 tons per annum of tinplate or substitutes. They do not, however, take into account *all* of the expansion which will be required for producing containers for packing vegetable ghee, the production of which has been planned by the Government of India to be increased by 125,000 tons of Vanaspati per annum during the first five years of the plan. There are two reasons for this. Firstly, it is by no means certain exactly when all these new plants will come into production. Secondly, it is not known how much of the output of these plants will be packed in four-gallon kerosene oil type containers and how much in smaller packings.

213. It is not the function of this Panel to advise the Government on this matter as the subject is receiving the attention of another Panel in the Food Department, but we cannot help but mention that it would both be economical and desirable from the health point of view to pack these vegetable products in cans of 1 lb., 2 lb., 5 lb., and 10 lb. capacity. In the first instance, such cans can be manufactured from lighter gauges of sheets and on high speed machines which would give the optimum bulk production, resulting in considerable economies in price at which such empty cans could be offered to packers. Secondly, and of equal importance, the smaller packings can be made of a tamperproof construction making it impossible for unscrupulous dealers to adulterate the contents which is one of the greatest evils associated with the use of a four-gallon tin.

214. Government have already recognized this as will be seen from the following paragraph taken from page 36 of the Reconstruction Committee of Council, Second Report on Reconstruction Planning published in 1944 :—

> "Prevention of adulteration and improvement in quality.—An important aspect of food policy must be the prevention of food adulteration. Adequate legal provisions and effective administrative measures for the prevention of adulteration of foodstuffs have still to be created in India. Much of the necessary exploratory work has been carried out already under the aegis of the Central Advisory Board of Health which has published two reports on food standards and the legislative and administrative control necessary. These reports supply a basis for future action."

215. *Location of new plants :* It is not considered necessary to make any recommendations in this connection as will be seen from the list of manufacturers on page 59. There is a fair geographical spread at present, and these container manufacturers are all likely to consider expansion wherever the demand for containers arises.

216. Although there is no large scale tin box manufacturing in Madras at the moment, the Metal Box Co. propose to open a new plant there early in 1947 to manufacture for customers who, up to now, they have served from their Bombay and Calcutta factories, and also to take care of the growing demand for containers for vegetable ghee in this province.

217. *State aid for Plant expansion :* Concerning assistance from the State for the development of the tin container and the hollow-ware industry, the only important item to which consideration should be given are the questions of railway freights and tinplate supplies.

218. Freight rates at the moment are high—new tin containers being classified as 4th Class. The container manufacturers claim that these rates are too high, and they further claim, quite rightly, that the railways actually recover freight on three separate occasions in dealing with this traffic. In the first place the raw material—tinplate bears freight from the Tinplate Company's

works at Tatanagar to the fabricating factories. Secondly, the empty containers after fabrication bear freight at 4th class rates and again when the containers are filled and are despatched to consumers throughout the country, the tin box itself again bears some freight. In a case put forward in July 1945 for the consideration of the I.R.C.A. Conference at Jamnagar, the container manufacturers made the following points:—

(1) Empty tin containers are of low intrinsic value and being used for packaging of consumer goods, are sold to manufacturers and distributors as distinct from the general public. This position should be contrasted with that of "tinned-ware" with which empty tin containers are classified. The expression "tinned-ware" best describes frying pans, saucepans, milk cans, etc. which are articles ready for direct sale to the public and are of much higher intrinsic value and carry a large profit margin to the manufacturers.

(2) The profit percentage on empty tin containers is low for the development of the industry has only been possible by following policy of "high-turnover-low-profit".

(3) It is claimed that the traffic is considered by the railways largely in terms of empty four-gallon kerosene oil tins which are, from their point of view, bad freight. The claim is made that similar tin containers are good freight. Messrs. Metal Box Co. of India Ltd. have already submitted a representation to the I.R.C.A. Conference in support of their claim. We have carefully examined the matter and support the claim made by the Industry for revising the railway rates in a manner as would make their incidence as low as possible, thus encouraging the packing of foodstuffs, agricultural and other products, whose development has been planned in various provinces. Large scale movements of tinned products from agricultural to industrial provinces or from the hinterland to the ports for export, is bound to result in a considerable increase in the volume of traffic which would more than compensate the relief sought by the industry for the movement of empty cans and containers on the rails.

219. There is, however, one other important point under the heading "State Aid" to which we must draw Government's attention. We refer to the availability of raw material. As will be seen from the figures quoted on page 63, India's present requirements of tinplate is at least 90,000 tons and estimated to rise within 15 years to 150,000 tons. The maximum output from the Tinplate Company of India's works, the only indigenous source of supply, is 70,000 tons per annum.

220. At present, owing to a world shortage of tinplate, it is impossible to import supplies from abroad, and it is reliably estimated by experts that there is no hope of any other tinplate producing country being in a position to export supplies to India for at least two years.

221. On the short term basis it is, therefore, evident that India will not be able, through shortage of raw material, to manufacture her full requirements of containers and this is likely to have a serious effect of the economy of the country.

222. The Government of India will therefore have to give very serious consideration as to whether they will arrange for India's tinplate industry to be expanded or whether they will depend upon imports. We understand from the Tinplate Company of India that they would be prepared to consider expansion

of their present rolling facilities provided they received assurances on two points:—

(1) That sufficient steel bar for rolling tinplate sheets was provided.

(2) That adequate financial arrangements were made by the Government of India for the capital cost of the plant.

The Tinplate Company estimate that it would take at least two years for them to put in the necessary rolling and finishing mills to increase their capacity to 100,000 tons.

223. It will have to be very seriously considered by Government whether they should plan for increased production of tinplate on the lines indicated or whether they intend to proceed with the proposal for a plate and continuous strip mill, which proposal has been fully dealt with by the Iron & Steel (Major) Panel in their First Report, pages 40 and 41. It should be borne in mind that if a plate and continuous strip mill is brought into operation in India that this would take care of all-India's requirements of tinplate up to a maximum tonnage of 200,000 tons per annum, and would therefore render obsolete and surplus the Tinplate Company's hot pack mills. We should also point out that it is estimated, by the Major Panel, to take five to seven years before the continuous strip mill could reach economic production. Having regard to the fact that India's minimum tinplate demands for the essential purpose of packing kerosene and food will rise within the next five years to approximately 100,000 tons, Government will for strategic reasons have to consider the advisability of increasing, within that period, the country's indigenous production, by one means or another, to a minimum of 100,000 tons.

224. We would add that if Government decided to increase the capacity of the existing Hot Pack Mills, rather than to wait for seven years for the plate and continuous strip mill to commence production, then from the point of view of amortizing the additional plant involved, with the least possible cost to the consumer over the period before the strip mill is in operation, the sooner this project is proceeded with the better.

225. *Control of Industry :* In regard to the control of prices, the industry is so placed in its relations to its consumer that its own development rests entirely on the cheap prices at which cans of various sizes and designs can be supplied to their consumers. The majority of products sold in tin containers in this country have to compete with similar imported products, and unless the container manufacturer supplies his goods to the packer at the lowest possible prices, the packer would be unable to compete with imports and the container manufacturer would lose the business anyway. There are two further safeguards which would ensure containers being sold at the lowest possible price—

(a) That it is always possible for the larger consumers to install their own container making plant in the event of them not being able to obtain supplies from the container producers at the cheapest possible rates.

(b) There are already sufficient container manufacturers to ensure a healthy price competition.

226. We do not feel that there is any need to establish a Bureau of Standardization and Testing Laboratories for this Industry as this is not done in any other country in the world. Nevertheless, we do strongly recommend that all container manufacturers should be associated with the proposed new Indian Standards Institution, as is the case in other countries. This would ensure the greatest possible degree of standardization in sizes and styles, and would result, as has resulted in other parts of the world, in the elimination of certain type of containers which are wasteful in material and productive capacity.

227. *Marketing Organization:* What we have stated above in regard to the Bureau of Standardization and Testing Laboratories is also applicable in respect of marketing organization. The manufacturers should be allowed to handle their products independently and distribute them on the lines they have hitherto done as the same has been found efficient and economical.

228 *Export:* There is clearly no possibility whatsoever of the export of empty tin containers. Any country or any manufacturer in any country who require containers to a volume which would make export attractive, would clearly, because of the volume of their requirements, establish its own container manufacturing industry. The real prospects for export are of the finished product packed in attractive reliable and inexpensive containers, but consideration of this is beyond the scope of this Panel.

229. *Enamelware:* This industry was started in this country during the quinquennium following the First World War and like any other important metal industry, its origin was made in East India where four firms in particular began manufacture on modern lines though on a small scale. These firms were:—

The Bengal Enamel Works, Ltd., Palta;
The Bengal Enamel & Stamping Works, Calcutta;
The Enamelled Ironware Ltd., Jamshedpur and
The Pioneer Enamel Works Ltd.

230. All these firms were started by enterprising Bengalees who went to Japan to make a special study of this industry. Unfortunately, when they started manufacture on a small scale basis in this country, the Japanese started dumping cheap enamelware bringing prices down considerably. Therefore, these firms submitted a representation to the First Tariff Board which met in 1923 to investigate the development of the Iron & Steel Industry. Excluding the manufacturers at Jamshedpur, the other three companies submitted to the Board that their working would be seriously prejudiced if the import duty on steel sheets were raised to 33⅓ per cent as proposed by the Tata Iron & Steel Company Ltd. They contended that the latter would not be in a position for several years to produce steel sheets suitable for enamelling and therefore, they should be allowed to be imported free of duty to enable them to overcome difficulties arising out of the use of high priced material in the initial stage of their career. The Bengal Enamel Works Ltd., further demanded that the chemicals required should be allowed to be imported free of duty and other firms made similar suggestions during oral evidence. All three firms spoke of a heavy fall in the prices of enamelled ware and of keen competition both from Germany and Japan, but all the firms were opposed to an increase in the import duty of 15 per cent *ad valorem.* In support of their argument, they submitted that in India enamelware was utilized for the same purpose for which products manufactured from brass and aluminium were utilized and they therefore apprehended that if prices of enamelware were substantially increased the demand would correspondingly decline.

231. The Traiff Board concluded that the prospects of the Enamelware Industry were not unfavourable if initial difficulties could be removed. They agreed that it was desirable to establish the manufacture of this industry in the country as it made room for small capitalists to start on a small scale and as technical processes were not difficult. However, they stated that nothing would be gained by imposing a high duty on imported enamelware as the market was not a large one then, and it would be wholly inconsistent with the protection offered to the Steel Industry to exempt from duty sheets of the kind which were likely to be produced in the country. As a matter of fact, the Tinplate Company of India Ltd., were then manufacturing sheets of suitable quality and they felt that the Tata Iron & Steel Co., Ltd. should be equally successful. Again, the

cost of sheet in the manufacture of enamelware was only one-third of the value of the finished goods. The proposed increase in the duty on sheets then meant only an increase in the cost of production by 1½ per cent. They therefore suggested that the indigenous manufacturers should supply sheets to Calcutta firms on the same terms as they had promised in the case of the Jamshedpur firm, as any encouragement to this small industry would be in the long run beneficial to the Major Industry. The proposal of the firms to allow them refund of duty on imported sheets was turned down, but the Board recommended that such chemicals as Borax, Cryolite, Cobalt Oxide, Antimony and Felspar should be made available from abroad duty-free to the Enamelware Industry. As the Government had received similar applications from other industries and as the question involved a substantial sacrifice of revenue if all such requests were granted, they left the matter to higher authorities to decide. The decision was against duty-free imports.

232. The outcome was that the Enamelware Industry did not progress in this country, as it should have until the conditions during the war brought about a complete change and gave considerable impetus because of the heavy demand for enamelware to meet the requirements of hospitals, field ambulance services, etc. Today, the number of firms manufacturing enamelware has increased to over a dozen and its manufacture is spread all over the country. Companies who took up its manufacture on a large scale and worthy of mention in this Report are Messrs. Kamani Engineering Corporation Ltd., Bombay, Messrs. Vizir Enamel Works, Bombay and Messrs. Sur Enamel & Stamping Works, Ltd., Calcutta. Three factories were established in Northern India and one in South India. These factories are not working to total capacity today owing to lack of coal.

233. When the development of this industry was first examined by the Tariff Board in 1924, the import of enamelware was as under :—

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	Value of all imports (In lakhs) Rs.
Average of the 3 years 1911-12 to 1913-14 ...	27·2
1920-21	42·9
1921-22	20·1
1922-23	23·6

234. During the quinquennium before the war, the import of enamelware was reduced approximately by half and was as under :—

	Value of imports Rs.
1935-36	18,99,469
1936-37	14,80,931
1937-38	15,86,856
1938-39	11,66,059
1939-40	11,66,089

235. The following is an approximate indication of the output of the major items of production in India :—

		Total Annual Production.
(a)	Rice Plates 10 cm. to 16 cm.	6,00,000 pcs.
(b)	,, ,, 18 cm. to 26 cm.	12,00,000 ,,
(c)	Flat Plates 9 cm. to 16 cm.	8,00,000 ,,
(d)	,, ,, 18 cm. to 26 cm.	16,00,000 ,,
(e)	Soup Plates 22, 24, 26 cms.	3,00,000 ,,
(f)	Mugs 9 and 10 cms.	6,00,000 ,,
(g)	Bowls 10, 11, 12, 13 cms.	4,00,000 ,,
(h)	Wash Basins 30, 32, 34, 36, 40 cms.	5,00,000 ,,
(i)	Hospital and Sanitary wares	2,00,000 ,,
(j)	Miscellaneous enamelware	10,00,000 ,,
	Total	72,00,000 pcs.

236. *Target:* We are not in a position to indicate precisely the target to be achieved during the first five-year period of the Plan. In our opinion, the production which the industry has attained throughout the period of the war is considerable. This can well be appreciated from the replies which we received to our questionnaire. Messrs. Sur Enamel & Stamping Works, Ltd., Calcutta have stated that in 1937, they utilized Rs. 22,878 worth of good steel and non-ferrous metal whereas in 1944 their consumption of the same products was Rs. 1,05,560 which indicates nearly a five-fold increase. It is not possible for us to make even an approximate forecast at this juncture of the proportionate demand which may arise for enamelware products during the first phase of the Fifteen Year Plan. The fact remains that whereas the imports of enamelware in 1922-23 were about Rs. 23·6 lakhs, they decreased to Rs. 11 lakhs in 1938-39 when only five factories were in operation. To-day, more than a dozen factories are in operation all over the country and once the military demand is satiated, it is difficult to forecast how the surplus productive capacity available will be absorbed by the civilian demand. Some of the manufacturers including Messrs. Sur Enamel & Stamping Works Ltd. have indicated that before making extensions to their plants, they would like to see how the capacity augmented during the war is going to be utilized.

237. Messrs. Kamani Brothers Ltd., have made definite plans for setting up of a new plant with capacity for producing 36,00,000 units per annum. They believe that the production of their new plant would be easily absorbed in the country, and if necessary, they would also be in a position to export to the adjacent countries any surplus that might accrue after meeting the indigenous demand. We are of the opinion that the consumption of enamelware could be increased considerably within the country itself, if the product of the industry, which are mainly domestic utensils of a type commonly used by poorer classes of people, are made sufficiently cheap to encourage the latter to purchase them in preference to earthenware. There is then every possibility of the demand for enamelware products increasing manyfold. At the same time, we must indicate that there is a certain amount of prejudice among certain sections of the community to utilize utensils manufactured of enamelware. This may be coupled with the fact that at a not distant date, competition may come from utensils made from stainless steel. At the moment, there is no information available to indicate the nature of competition which the enamelware industry is likely to face from the manufacturers of stainless steel hollow-ware. Therefore, we are not in a position to indicate precisely the number of factories that should be located in various parts of the country together with their capacity. We do

know that if enamelware of good quality is produced in the country at reasonable prices and offered for sale as a durable substitute for earthenware, then there is every possibility of the augmented capacity being fully utilized and it might even be necessary to set up further factories to meet the increased demand both at home and abroad depending on whether the price would be sufficiently low for Indian goods to be substituted for Japanese.

238. Again it is very difficult for us to indicate whether production of enamelware in a large scale unit would bring about a considerable reduction in production costs and consequently in the sale price because, at the moment, there is no information available in the country regarding the operational costs of a large-scale plant against which could be measured the difference in its works costs and those of the existing factories. We, therefore, recommend that Messrs. Kamani Brothers Ltd., should be allowed to put into operation their post-war scheme of installing a plant with capacity of 300,000 units per mensem and that they should be given all facilities required. Only when the factory comes into operation, it will be possible for any one to indicate the price at which products of such a plant could be marketed so as to induce their purchase by people whose limited purchasing power have precluded them from utilizing factory made utensils in preference to earthenware. We, however, feel that manufacture of enamelware in large scale units would work out considerably cheaper as has been the case of metal containers manufactured by Messrs. The Metal Box Co. of India Ltd. If our belief is proved to be correct by the results achieved, then their products will find increasing buyers not only in this country but also abroad, provided quality products are manufactured comparing favourably with the products now obtainable from Sweden and the U.K. As we believe that the enamelware industry in the last two named countries will find ready markets nearby in the poverty-stricken Europe of to-day, serious competition from these sources need not be anticipated if similar goods of equal durability and superior quality are produced in this country and efficiently marketed.

239. For the same reason, competition from Japan is doubtful. We, therefore, feel that besides the new plant which Messrs. Kamani Brothers Ltd. propose to establish on the west coast, a large scale plant may be set up on the east coast preferably at Vizagapatam, so that not only the markets in the adjacent provinces may be catered for, but also the export markets in Burma and Malaya. If private enterprise in South India is prepared to set up a plant on the Coromandel coast, we suggest that it should come into operation two years after Messrs. Kamani Brothers Ltd.'s plant has commenced fabrication. During this period, we feel it would be possible to have an approximate idea of the capacity of the country to absorb more enamelware goods and the ability of the industry to supply them at prices which would stimulate demand.

240. We do not think the construction of large scale factories in Northern India or in Central India, C.P., and Orissa would be justified during the first five-year phase of the Plan. There is a certain amount of prejudice against the use of enamelware products particularly in these parts of the country and until such time as the public show a greater inclination to utilize enamelled utensils, their production in these provinces on a large scale would be unwise. This does not preclude small scale factories being installed to meet such local demand as may exist. But care must be taken to see that such plants are in a position to manufacture and market products of good quality at reasonable prices. Given favourable conditions, there is room in the country for two large scale factories manufacturing over a million units per annum and two or three small factories, which may be established in provinces where they do not exist to-day, but their development must be undertaken in stages as and when more information is available regarding the ability of the industry to produce

enamelware utensils at cheap prices and the increasing willingness of the consumer to absorb them.

241. We regret, it is not possible for us to make any definite recommendations as the products of this industry as consumer goods which not only depend upon the low prices at which they are produced but also upon the tastes and prejudices of the consuming public, specially among the poorer classes of the community. When the Tariff Board first examined the representations submitted by the industry in 1924, they definitely stated that the scope for consumption of enamelled ware was limited. No improvement has since been made in the demand presumably because, the manufacture was not taken up on scientific lines, being restricted to four or five small scale producers alone. It is therefore, very necessary that facts regarding both production and distribution should be examined very carefully before new enterprises are set up in the country.

242. *State aid for Plant expansion:* Raw materials required in the manufacture of enamelware are mainly black sheets of 20 to 26 gauge of enamelling quality, quartz, felspar, china clay, coal and such chemicals as Borax, Cryolite, Cobalt and Sulphuric acid. The manufacturers of enamelware have indicated both in their replies to the questionnaire and in the oral evidence that they would prefer to purchase imported sheets rather than those manufactured indigenously because they said it was difficult to enamel locally manufactured sheets to produce the high finish obtainable on imported sheets. The local fabricators have not enough technical knowledge regarding the proper treatment of the basic material and on this subject we feel, the primary producers who are interested in the consumption of their products, should accord every facility even at some financial sacrifice to see this industry established on sound lines.

243. With regard to the free import of chemicals and other raw materials from abroad, we regret, we are not in a position to offer any comments. This matter is for representation and consideration by the Tariff Board. On a previous occasion when an application was made by the Industry, it was rejected. Then conditions of unfair competition existed particularly from Japan but to-day those conditions are, to say the least, less evident. Therefore, as long as this country is in a position to manufacture and market its products in fair competition with foreign products, we do not think it justifiable to put any unnecessary burden on the Exchequer by depriving it of a source of revenue.

244. In regard to technical assistance to the industry, we suggest that at the proposed National Metallurgical Laboratory at Jamshedpur, a section or sub-section may be opened where experiments may be carried out so that suitable quality sheets may be manufactured for the Enamelware Industry. Similarly, methods may be devised for the proper enamelling and the services of experts from this laboratory should be made available to the various units in the Industry so that a standardized process of enamelling may be evolved which will enable the industry to produce goods of superior quality as are now being produced in the United Kingdom and Sweden.

245. From replies received to our questionnaire and from the evidence collected by us, tariff protection is not requested by the Industry.

246. We, therefore, feel that there should not be any import restrictions and imports may be allowed to the extent required to balance the indigenous production with the total demand.

247. *Control of the Industry:* In regard to the control of the industry, we do not think it is justified under existing conditions. If the industry is not protected and the imports are to be unrestricted, the prices will be naturally governed by the law of supply and demand. Hence, no control is necessary

for fixation of prices. Bureau of Standardization and Testing Laboratories for the products of this industry is likewise not essential, though it is desirable, particularly if the products of this industry are to find markets abroad. In their own interests, it would be desirable that the various units in the industry should manufacture their products according to a set standard which should compare favourably with the standard set by other countries. If, for this purpose their products need testing, then this can be done at the National Metallurgical Laboratory. We consider it necessary that the products of this industry or any industry which is styled as Minor Iron and Steel Industry and fall within the scope of this enquiry, should be manufactured to as high a standard as are the basic steel products manufactured to-day.

248. The various units in the industry may be allowed to market their own products as they have done hitherto. This would induce healthy competition between them to the benefit of the consumer and we see no reason to interfere with the trade channels through which these goods have been marketed all over the country for many years.

249. In regard to export possibilities, we propose to deal with the matter in Chapter X.

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CHAPTER VII

SURGICAL INSTRUMENTS AND APPLIANCES

250. The phenomenal development of this industry during the war is an outstanding example of the good results which can be achieved by planned development, when materials and equipments are adequate and when they are operated under technical guidance. It is no small achievement that 73 per cent of India's needs of the general surgical instruments and appliances, 98 per cent of orthopædic instruments and appliances and 100 per cent of Ward and O.T. equipment requiring high craftsmanship, superior materials and vigilance in supervision have been manufactured in this country in the brief space of five years and in circumstances which were far from normal. It is a high testimony to the thoroughness with which the Medical Stores Planning Directorate in the Supply Department and the Control Organization for Surgical Instruments Development which was built up by the Controller General of Inspection of the M.G.O. went about their business. As the development of the industry was unique, it would not be out of place to state a few facts here in detail.

251. Before the war, the surgical instrument industry in India consisted of a small number of workshops, ill-equipped in machinery and technical personnel for the production of high quality instruments. It mainly centred in the Sialkot district of the Punjab. The production was restricted to simple types of instruments and appliances of poor quality for which there was a considerable demand in the country from low-paid physicians. Purchase by the Government was consequently restricted. A few firms also existed in Bombay, Calcutta and Madras. At Bombay, Messrs. Powells Ltd., and Messrs. Eyres & Co. had sufficiently well equipped factories to turn out instruments of superior quality. The production of these firms was restricted to the manufacture of Aseptic furniture, Sterilizers and simple appliances. Very few instruments required in a surgical theatre were manufactured. In the Punjab, the industry was primarily on a cottage scale in the district of Sialkot, where over one hundred small workshops existed, which were managed by craftsmen, who had acquired hereditary skill in imitating simple instruments imported from abroad. Lack of proper facilities for heat treatment, crude electroplating arrangements, etc. made it impossible for them to produce instruments of quality and what they marketed was only a cheap imitation of foreign high grade instruments.

252. The position was considerably altered with the outbreak of the war and the closing of the Mediterranean to normal traffic to India. Huge orders emanated from Army quarters in the Middle East and the supply position became acute as very short deliveries were stipulated for complete field units. Orders were placed frequently and at irregular intervals, without giving any indications regarding specifications or samples. These difficulties were overcome by the D.G.I.M.S. In 1942, a Director of Production (Surgical Instruments and Appliances) was appointed to control production and achieve greater efficiency both in quality and output. His organization gave technical advice on the selection of steels and their heat treatment. Ultimately, provisioning of correct grades of steel became his responsibility. He also introduced the standardization of a few instruments and a few patterns serving similar functions. A new Price Vocabulary of Medical Stores was drawn up after the matter had been discussed in detail by a Committee of Surgeon Specialists. Schedules of standard instruments were prepared and the number of patterns was reduced

to a minimum consistent with efficiency. M.G.O.'s method of provisioning was adopted to obviate difficulties arising out of frequent and irregular demands for early deliveries. A central planning of purchase was organized and adequate arrangements were made for inspection of stores at the Medical Depots, particularly in Lahore.

253. During the first year of the working of the development plan, a marked improvement in the standard was obtained. Heat treatment was put under control and certain operations were converted from hand to machine processes. However, continued trouble was experienced in respect of the quality of steel available which was unsuitable for manufacture of surgical instruments of a high grade. In Sialkot, it was difficult to prevent a large number of defective instruments being made, since the workers were all paid on piece-work or on contract basis and the managements were unable to control the quality of their output. In Bombay, the chief difficulty was to step up production and this was only overcome to a very limited extent, the limiting factor being shortage of skilled labour.

254. With the Controller General of Inspection assuming responsibility for inspection, specifications and drawings of each instrument were prepared as in the case of other stores but as indigenous manufacturers were still unable to adhere to the specifications, it was decided in July 1943 to obtain expert technical advice from the U.K. to be placed at the disposal of the indigenous manufacturers. As a result of these measures for efficient production of surgical instruments and appliances in this country, supplies of better quality were produced from November 1943 onwards.

255. India was, therefore, in a position to meet the large requirements not only of her own military forces, but some of those of her Allies. Supplies of surgical instruments to Russia alone totalled 80,000 units up to the end of 1943. The Supply Department on an average, purchased in 1943, surgical instruments to the value of about Rs. 4 to 5 lakhs per month.

256. The range of surgical instruments now manufactured in the country are made from good quality carbon steel, hand-forged, shaped and finished, hardened, tempered, polished and silver or nickel plated. Generally speaking, they are all of relatively small sizes and can be easily worked and handled with the minimum use of machinery and special equipment.

257. Surgical appliances produced in India comprise High Pressure Steam Sterilizers tested to 30 lbs. per square inch steam pressure, hydraulically operating tables and dental chairs. In addition to these complex appliances, simple fittings for supporting limbs in plaster cast are also made.

258. *Future of the Industry:* Manufacture of surgical instruments including scissors and appliances is concentrated (75 per cent) in the Lahore and Sialkot Districts of the Punjab and the rest (25 per cent) at other places particularly in Bombay. The majority of firms started during the war in Sialkot were not equipped with the necessary equipment and technical supervision.

259. In Bombay companies like Powells and Eyres were manufacturing instruments and appliances of better quality before the war. In their case, better equipment and a high standard of skilled personnel meant higher costs of production and consequently higher prices. The result was that they were excluded initially from receiving war orders. Consequently, Government had to reorientate its purchase policy.

260. In the following Table No. 9 is given a list of principal manufacturers of surgical instruments in the country :—

TABLE NO. 9

List of important manufacturers of Surgical Instruments.

1. Imperial Surgical Co., Sialkot.
2. R. C. Benn & Co., Sialkot.
3. A. F. Ahmad & Co., Sialkot.
4. Bharat Surgical Co., Sialkot.
5. Surgeon Surgical Co., Sialkot.
6. Midico Surgical Co., Sialkot.
7. Lakshmi Surgical Co., Sialkot.
8. M. F. Elahi & Co., Sialkot.
9. B.A. Surgical Works, Sialkot.
10. Powells Limited, Bombay.
11. Bombay Surgical Co., Bombay.
12. E. Eyres & Co., Bombay.
13. H. Mukerji & Co., Calcutta.
14. Ghulam Nabi & Sons, Lahore.

The usual equipment of these plants comprise, a Heat Treatment equipment, a Nickel and Electroplating unit, a Small Machine Shop, a Grindary and Polishing Shop. The number of workers employed ranges from 50 in small factories to 400 in the large factories.

261. The output of the Industry was placed at about 15,000 instruments a month from the Punjab firms and about 5,000 a month from firms in other parts of India. All types of instruments except those needing electrical parts or optical lenses were made by the industry, though due to lack of suitable steel and machine tools, the factories were unable to produce some of the more difficult combined action bone-cutting instruments, compressing foreceps and geared retractors.

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262. In the opinion of Mr. Taylor Gill, the Controlling Authority for Surgical Instruments Development, the present conditions of Kotli Loharans working in the Sialkot factories is deplorable. He states that modern factories should be equipped with the following machines housed in clean, well lighted factories as a first principal of development :—

1. Small Power Hammers and Drop Stamps.
2. Electroplating Plant.
3. Power Presses.
4. Heat Treatment Furnaces.
5. Welding Plant.
6. Machine Tools.
7. Grinding equipment.

263. In addition, raw materials of the finest quality are necessary for manufacturing to British Standard Specifications tested and certified by a Government Metallurgist stationed at the primary producers' Plant. In his opinion, " it is not possible for a surgical instrument factory to survive on its own in the post-war period " and he suggests " a good combination would be for a plant to take up manufacture of Aseptic Furniture and Cutlery besides Surgical Instruments ". Again, according to him, no development effort would have the remotest chance of success unless a definite standard was set and rigid

inspection was enforced as was done during the war by the Controller General of Inspection.

264. *Target of production :* Messrs. Powells' factory which was originally situated in Bombay has now been transferred to Baroda State. Its productive capacity is approximately 25,000 units per annum, comprising delicate instruments of a complex nature. The plant is well equipped and production is carried out on scientific lines. Similarly, Messrs. E. Eyres & Co. have a plant with a capacity of about 15,000 to 20,000 units per annum. This company specializes in hand-forging. The Bombay Surgical Company is a medium-sized plant manufacturing about 10,000 units per annum in 200 different types of instruments.

265. The total capacity in Bombay is therefore about 55,000 pieces per annum. If we add to this, the small production in Calcutta and Lahore of about 5,000 instruments, we arrive at a capacity of 60,000 pieces per annum. These factories represent 25 per cent of India's total capacity, the balance being in Sialkot, we get the total existing capacity of about 250,000 instruments per annum. We are informed by the Trade that India's total requirements of surgical instruments to-day is not more than 125,000. To enable us to estimate a target of production, we sought the advice of Dr. S. P. Nair of Powells Ltd., who was sent out by the Government of India on a special Industrial Mission, to examine industrial plants in Germany, when the Allies took over control. We sought his advice particularly to measure the requirements of surgical instruments in the light of the report of the Bhore Committee on the Fifteen-Year Public Health Plan. Taking into account the number of instruments required in a medium-sized hospital of one hundred beds, Dr. Nair estimated that for the number of such hospitals envisaged by the Bhore Committee a total of 900,000 instruments would be needed over the first five years of the Fifteen-Year Plan. This would absorb the bulk of the existing capacity in the country provided the Bhore Committee plan is implemented. However, this would cover only the requirements of hospitals, maternity homes, dispensaries, etc. that will come into existence under the State Plan but there are numerous private hospitals, nursing homes, dispensaries, etc. where a large number of surgical instruments are also required.

266. Dr. Nair in giving evidence on behalf of Messrs. Powells Ltd. stated that his company planned to extend their factory to produce upto 500,000 instruments per annum including cutleryware, such as knives, scissors, etc. Similarly, the Mysore Government expressed their intention to manufacture high grade surgical instruments in South India, in order to provide an outlet for stainless steel, in the manufacture of which the Mysore Iron & Steel Works are experimenting. Their plans have not yet developed to an extent to indicate to us the number of instruments to be manufactured.

267. We have no objection to efforts being made by Messrs. Powells Ltd., who are known throughout the country as a pioneer manufacturer of surgical instruments, and by those who are trying to establish a new factory in the southern part of the peninsula where the basic materials required for the industry are likely to be available. But, we must draw their attention to a matter of immediate concern to the industry. The capacity which is already available is about 250,000 units per annum which is adequate to look after the entire demand under the Bhore Plan without the creation of new units. However, that plan would come into operation by stages and therefore, we will have considerable surplus capacity available for absorption in this country and for marketing abroad during the interim period. We would, therefore, sound a note of warning to all prospective *entrepreneurs* to proceed with their plans cautiously. Messrs. Powells Ltd. feel that their projected production would

readily be marketable in this country and abroad owing to the superior quality of their output. They also feel that by increasing their capacity, they will be able to reduce production costs. They, therefore, fear neither internal nor external competition.

268. We have shown that about 75 per cent of surgical instruments are produced by the cottage scale manufacturers in the Punjab. It is undesirable that these cottage scale manufacturers should be eliminated. Any attempt, therefore, to expand large scale production units should not be at their expense. If Messrs. Powells Ltd. establish a plant of the type they contemplate, then a line will have to be drawn somewhere demarketing the spheres of distribution so that both they and their small and cottage scale competitors in the Punjab may be able to market their production during the war to 75 per cent of the total production, they should not as a matter of right, claim an equivalent civilian market for surgical instruments during the post-war period and thereafter. If the capacity has increased it was due to the complete cessation from abroad. They have produced instruments of a quality and type which may not be acceptable to surgeons during the post-war period. Therefore, if the small scale industry in the Punjab has to be put on a sound and economic basis, such units, or manufacture of such instruments which would not be carried out with as much precision and accuracy as could be done in the modern bulk producing plants, should be eliminated. This is a matter on which, we cannot submit detailed proposals to the Government, as we do not know the nature of competition that is likely to be faced by the small producers. However, we feel that this problem is bound to arise within the first five years of the Plan and therefore we draw this matter to the attention of those who are closely associated with the Industry so that they may devise plans whereby both the large scale and cottage producers have a place in the economy of industry.

269. *State aid to Industry :—*

(a) *Raw materials :* Considerable difficulty was experienced when indigenous stainless steel was utilized for the first time in the manufacture of surgical instruments, until Messrs. Tata Iron & Steel Co. Ltd., deputed a technical expert, who went round to the manufacturers in the Punjab and gave practical demonstrations of heat treatment, etc. required in processing the steel. The Director of Industries, Punjab and representatives of the Surgical Instruments Industry submitted that, whenever they utilized foreign steel for the same purpose, no difficulties were experienced. We are now informed that Messrs. Tata Iron & Steel Co. have given to the Department of Industries, Punjab, the equipment which their technical expert took with him when advising the fabrications in the correct methods of processing indigenous stainless steel. The Punjab Government also took over from the Government of India, the organization which was set up for controlling production of surgical instruments.

270. We also understand that the primary producers mainly responsible for the supply of this class of steel are making arrangements with British manufacturers of stainless steel to utilize their patents. We have every hope that shortly indigenous stainless steel of suitable quality will be available to surgical instrument makers. However, we have no desire to leave the matter at that. We submit that, in the event of the indigenous manufacturers being unable to supply suitable stainless steel and if the fabricators find it cheaper to use the latter, then to help the industry the small quantity of stainless steel required may be allowed to be imported at the ordinary tariff duty. On a matter of principle, we admit that such a course would be contrary to the dictums of sound planning if the products of a basic industry are to be set aside in preference

to imported material. So, before any such action is taken, we suggest that the matter should be thoroughly investigated by the Controlling Authority, which we recommended elsewhere, to examine the case and only permit such import in the event of the local industry being unable to overcome such difficulties which would preclude them from supplying what is required. Amongst these difficulties, may be mentioned the probability that only extremely small quantities of certain sections will be required.

271. (b) *Cheap Power:* We have no particular recommendations to make in regard to the supply of cheap power because hydro-electric power is already available both in the Punjab and Bombay. If a new factory is to start in Mysore, adequate power is available from the State Hydro-Electric Scheme.

272. (c) *Technical Assistance:* As indicated above, the Punjab Government have already taken over the Surgical Instruments Centre at Sialkot. The functions of this organization should be :—

(i) to train local draftsmen in the various processes involved in the manufacture of instruments and allied articles ;
(ii) to advice in the preparation of jigs, fixtures, cutters and gauges for private firms at their premises and also to assist them in reconditioning their machines and hand-tools ;
(iii) to carry out demonstrations at the Centre and in private factories ;
(iv) to test all instruments and allied products ;
(v) to effect standardization and assist in the production of new items of surgical instruments and allied products ;
(vi) to assist the factories in obtaining adequate supplies of raw materials and to test their suitability for the industry ;
(vii) to establish contracts with indigenous and foreign purchasing agencies to assist the small industries to secure orders and to popularize the indigenous products by propaganda ;
(viii) to keep in touch with modern trends and developments in the industry in other parts of the world so as to keep pace with the manufacture of up-to-date instruments and appliances ; and
(ix) to set up a pilot plant to carry out research in production methods, to eliminate unnecessary burden on production costs and to reduce the wastage at the various small factories by standardizing processes and methods of production.

273. We would strongly urge upon the Government of the Punjab to see that the objects indicated above are carried out, and that this Centre is made a model to be copied by other Provincial Governments for the development of various other industries, particularly on a small scale, so that an outlet may be found for suitably employing the available supply of labour in small towns, and also to find scope for investment and the exploitation of the resources of the small capitalists.

274. (d) *Control of Imports:* We have stated earlier the productive capacity of the industry. The capacity increased so rapidly during the period of the war that, we suggest that no instruments of the types now manufactured in the country should be allowed to be freely imported. Only such quantities should be allowed entry as are not produced in India.

275. (e) *Control of Industry:* We do not consider it necessary to advise the Government to control the industry in the matter of prices, as the industry is in a position to meet the demand in the country.

276. (f) *Establishment of Technical Laboratory and Standardization of products:* In regard to the establishment of a Technical Laboratory, we hope that the Punjab Government will provide the Surgical Instruments and Allied

Products Development Centre with enough equipment to carry out technical research. Similarly, the National and Metallurgical Laboratory to be established at Jamshedpur may be required to establish a Section of the Laboratory for the development of stainless and special steels for utilization in this and other industries.

277. The necessity for standardization of specification for this Industry is paramount. A suitable committee might be connected permanently either with the National Metallurgical Laboratory at Jamshedpur or with the Development Centre at Sialkot. This committee should consist of two technically qualified representatives from the D.G.I.M.S., two eminent surgeons, one metallurgical expert, one representative of the manufacturers and one from the trade.

278. *Marketing Organization :* In regard to the Marketing Organization, we feel that the large scale manufacturers may be allowed to exercise freedom of marketing their materials. It will never pay these firms to market products of inferior quality because only on the score of quality will their products find a place in the surgeries of this country and abroad.

279. It is only when the products of the small scale industries are involved that the question of marketing needs careful thought, particularly for the export trade. Foreign buyers who buy in bulk may place their orders on receipt of samples and if the goods supplied are not according to the sample, then the instruments manufactured in this country would get a bad name abroad and would consequently be pushed out of markets where they had found a footing. We are glad to note that the Government of the Punjab and their Director of Industries are fully alive to the fact and are arranging through the Surgical Instruments & Allied Products Development Centre, to introduce co-operative marketing of the products of this industry. We have no desire to describe here the methods which such a marketing organization should adopt, as we are confident that the Director of Industries, Punjab, and the representatives of the Surgical Instruments Manufacturers' Association, are capable of working out a plan of co-operative marketing so that the Industry will be placed on a sound footing and only standard products packed with the Organization's accepted trade marks will be produced.

280. We propose to deal with the export possibilities in Chapter X.

CHAPTER VIII

STEEL FURNITURE AND FITTINGS

281. This industry had its origin in India nearly half a century ago, when the renowned firm of Messrs. Godrej & Boyce was started for the purpose of manufacturing locks and padlocks in the country. Their products gained wide popularity for durability, quality and finish and in 1902 the company commenced the manufacture of safes. Mr. A. B. Godrej, the founder of the firm, made a special study of the technology of safe manufacture in the United Kingdom and Germany before installing his plant in this country. His own contribution to the production of better safes was his patent known as "16 corner bend construction" whereby the whole shell of a safe with its four sides, the back flanges and the door frame is formed by bending a steel plate at sixteen different places, thereby eliminating the use of angles for making joints, making safe breaking from the joints impossible. Similarly, special formula for fire-proofing composition was worked out with the assistance of expert chemists and safes and deposit vaults of the highest quality have been produced, which are renowned both in this country and abroad.

282. Successful manufacture of steel safes lead to the manufacture of safe like cabinets of strong steel sheets as it was felt that the middle class people in India, who could not afford to purchase conventional safes would need something durable to protect their valuables. Hence, these cabinets were manufactured incorporating the safety devices of a safe to a considerable extent, excepting the use of the patented fire-proofing chemicals and the heavy plates out of which safes were constructed. Success in the manufacture of these products encouraged the company to enlarge its production to embrace the manufacture of steel furniture from lighter gauges of sheets, etc. for domestic, hospital and industrial use. Another notable feature of development is that, whatever the range of products manufactured, they were able to market them at attractive prices, considerably lower than the price of imported articles, with the result that the Indian buyers benefitted by the reduction in price which resulted from competition with foreign products. To give but one example, imported steel filing cabinets were sold in India at Rs. 265 before indigenous manufacture was undertaken. Immediately this firm marketed their own similar filing cabinets, prices came down with the result that just before the war, they were marketing four drawer file cabinet at Rs. 108 against Rs. 115 for a similar imported product. It will thus be seen that the enterprise, technical knowledge, research and scientific planning by the pioneers and promoters of this plant have firmly established in the country an industry which can hold its own against any competition. The company was started with about half a dozen hands, to-day it employs more than 2,500 people.

283. With the popularity which steel furniture and fittings acquired other companies came into being and were started in the first instance by former employees of Messrs. Godrej & Boyce, just in the same way as some of the rolling mill established in the country, were started by former employees of the primary producers. Messrs. Alwyn Steel Works were started in Bombay and later removed to Hyderabad (Deccan), where a large scale plant was set up with the assistance of local financiers and of H.E.H. the Nizam's Government. An up-to-date factory has been built which besides manufactured vehicle bodies, hospital equipment, etc. for the Supply Department during the period of the

war. This company are now well-established and intend to expand. Factories were also set up in Bengal for this purpose and Messrs. The Steel Products Ltd. and the Bungo Steel Furniture Co. of Calcutta are two firms, who made excellent war efforts to meet the demands of the military and civilian authorities. In the Punjab, the home of small scale industry and enterprise, manufacture of steel furniture has been carried on in several small factories in the district of Gujranwala for over 20 years. These firms in the course of their development have gradually modernized their plants and are to-day manufacturing products which while they may not be of as good a finish as those of the large scale plants have a ready market in the agricultural districts of Northern India.

284. At the moment, the industry's basic steel is obtained from the primary producers. Ball-bearings and chemicals for fire-proofing are imported. The industry has been mainly concentrated in Bombay and Bengal for the reason that steel furniture has a large market in these industrially advanced provinces. Moreover, basic steel was available at the port prices, which was the lowest in the country.

285. It is not possible to state a target of production according to the units of furnitures and fittings produced, because being consumer goods, demand depends largely on the price and the tastes of the public. If the pre-war sales are taken as an indication for the future, then it is clear that the public taste is rapidly changing from timber products to the more durable steel products. We feel that we cannot do better than accept the industry's own expansion plans based as they are on intimate knowledge of public demand obtained from their widespread organization. Messrs. Godrej & Boyce have given an indication of their future production of some of the major items, which they plan to achieve during the five years of the Fifteen-Year Plan :—

Products	Approximate annual production in units.
Locks	6,00,000
Shelving Racks	2,00,000 R. Ft.
Beds (Hospital, household, etc.)	1,00,000
Hospital, Home and Office furniture	40,000
Almirahs, cabinets and office cupboards ...	30,000
Filing Cabinets	25,000
Coffers	15,000
Cash Boxes	15,000
Safes	7,500
Safe Deposit Locker Cabinets and Strong Doors ...	2,000

286. Similarly, Messrs. Alwyn Steel Works plan to double the capacity of their plant. The Noble Steel Products plan to manufacture sanitary fittings and hardware of stainless steel, in addition to expanding their capacity for domestic and hospital furniture and appliances.

287. Messrs. Godrej & Boyce have acquired a large area of land in the suburbs of Bombay and are erecting buildings of modern design for housing an up-to-date plant. They propose in addition to set up Assembly Plants at Madras and Delhi to meet the requirements of those markets. They further propose to set up a complete new plant in Bengal to meet the requirements of the markets in Eastern India, Burma and Malaya. Their total capital investment when their plans are completed would exceed a crore of rupees.

288. Our own recommendations to the Government of India are that these plans should be allowed to develop to their optimum capacity, in order

that the plants may be set up in various parts of India under management, which has already half a century's experience behind it. Because, the existing manufacturers are to be allowed to raise their production to maximum capacity, it does not necessarily follow that the manufacture of steel furniture and fittings should be confined to them. But because we are unable to express in precise terms, the demand for these consumer goods, we have no desire to keep out the new manufacturers in preference to those who are already established in the industry. But the scope for its development depends on the ability to move the basic materials at cheap rates from the primary producers to the fabricators' plant and on the proximity of markets. We cannot overemphasize the importance of ensuring that these conditions are satisfied before any further new production units are established.

289. *State aid for Plant expansion :* The basic raw materials utilized in the manufacture of steel furniture and fittings are M.S. Plates, Stainless steel tubes, rounds, hard and soft composition steel, mild steel bars, light structurals electrically welded tubes, machine screws, cold drawn bright rounds, hinges, nuts, bolts, rivets, black and galvanized wires, etc. The industry also needs chemicals, zinc paints, oil bound enamels, synthetic glossy paints, nitro-cellulose lacquers, phosphor bronze wires, leather, fire proofiing materials, glass sheets, mirrors, etc.

290. The industry will shortly have to face quality competition from abroad and therefore, has submitted to the Panel that they should be permitted certain facilities in respect of raw materials required in their manufacturing processes. Firstly, they desire facilities for unrestricted import of special paints and enamels, some steel products, gun metal, nickel-silver ingots and phosphor bronze wires because these items are not produced in India. Their other demand is in respect of inadequate supplies of ferrous and non-ferrous metals, as a result of which they are unable to attain full production. They therefore, urge that the Government should give them immediate facilities to import such of the industrial raw materials described above and particularly cold-rolled mild steel sheets, synthetic glossy paints and specialized machine tools which are only available from abroad and at prices comparable to those paid for these materials by foreign fabricators of steel furniture and equipment. We are in full agreement with the representation made by the industry. They have specifically stated that whereas foreign manufacturers are able to obtain their requirements of gun metal and nickel-silver ingots at Rs. 42 and Rs. 54 per cwt. respectively, the price of the same metals available from the importing houses is Rs. 80-8-0 and Rs. 160 per cwt. respectively. Therefore, in their opinion, the Industry cannot compete successfully with the imported articles unless these materials are available to them at approximately same prices which the foreign manufacturers pay for them.

291. The representation of the Industry in regard to the supply of sheets and plates, which are manufactured in the country, requires careful consideration. They have submitted that, in view of the difficulty experienced in working locally made sheets and plates and the extra expenditure involved, they should be allowed to import these sheets from abroad. In a written statement Messrs. Godrej & Boyce Manufacturnig Co. have submitted that :

> "Owing to the rough surface of these sheets and their faulty packing, we have got to first flatten them out in the rollers, then pickle them, neutralize the pickling acid, give one undercoat of rust resisting paint, rub down this, apply putty, give another undercoat, rub down that and give yet another undercoat, and then give two coats of finishing enamels and bake the paint in gas fired ovens. Unless all these coats are applied, the steel furniture will never have that bright and glossy finish which alone attracts a buyer to prefer steel

to wood. If we were to apply anything less than the total of five coats of paint, the resulting surfaces of the finishing product would be coarse-grained, and such furniture would not sell so readily as does the well-finished articles.

"The standard practice in Europe and America is to use Cold Reduced Fully Flattened sheets which due to their fine surface are covered by only one coat of finishing paint after bonderizing.

"Spot Welding cannot be used on local sheets due to mill-scale which tends to flake off under pressure and heat. If on the other hand pickling is resorted to before spot welding, the sheets become so sensitive that within a few hours, rust reappears, and now since a second acid dip cannot be used as it is impossible to remove the acid from the crevices formed by the spot welded joint, the only possible method is rivetting which due to its high cost and poor strength on thin sheets compels us to use a thicker gauge."

292. On the other hand, we are informed by the primary producers that if additional treatment is required on the sheets supplied to the manufacturers of furnitures and fittings, which is causing them inconvenience, it is simply because, the fabricators are using ordinary mild steel sheets manufactured for bazzar consumption and for further processing into utensils required for the poorer classes of people. These sheets are not meant for the manufacture of high-grade furniture. Special processed sheets for this purpose could be manufactured provided the fabricators pay for it. In our opinion, the question revolves round the price at which the primary producers can supply these specially processed sheets and this is a matter for an enquiry by the Tariff Board.

293. The Industry has not submitted any representation for assistance from the State for the supply of electric power, technical advice, tariff protection, railway freights or restriction of imports. Adequate electric energy is available at places where the factories are already situated and where they are likely to be erected during the post-war period. In regard to technical advice, action has already been taken by the Government of the Punjab in taking over from the Government of India, the Surgical Instruments and Allied Products Development Centre. A section might be added to help the small scale manufacturers of steel furniture in the Punjab. The Government are establishing a National Metallurgical Laboratory at Jamshedpur.

294. In regard to Import Control, the Industry submitted that no State action is necessary in this respect as the indigenous production can be offered at prices competitive with imports. As this condition is likely to prevail during the first phase of the Plan, we have no comments to offer.

295. We propose to deal with the export possibilities in Chapter X.

CHAPTER IX

HAND TOOLS

296. Sometime after the Panel started its inquiry about the growth and development of the industries concerned by the foregoing chapters, intimation was received from the Industrial Adviser to the Government of India that this Panel should also consider and advise the Government on the development of hand tools including edge tools but excluding agricultural and gardening implements. Some of the hand tools such as pick-axes, shovels, etc. are of universal use. They are utilized on farms, in gardens and for road and building construction. Therefore, the development of such tool manufacturing industry for the post-war plan, was referred to this Panel for consideration. We were also informed that the development of small tools normally used in workshops with machine tools has already been dealt with by the Machine Tool Panel.

297. *Brief history:* Manufacture of simpler types of hand tools used for agricultural and building purposes was known to the blacksmiths throughout the country and such tools have been manufactured for centuries. With the import of machine made tools manufactured from carbon tool steel on mass production basis and marketed at competitive prices, rapid decay in the production of these tools within the country took place until the Agricultural Implements Ltd., began manufacturing on large scale at Jamshedpur. When the first Tariff Board considered the grant of protection to the Steel Industry in 1923, two applications for protection for the manufacture of agricultural implements including hand tools such as picks, powrahs, kodalis and hoes were received, one from Messrs. Kirloskar Bros. Ltd. of Kirloskarvadi in Satara District of Bombay Presidency, who specialized in the manufacture of ploughs made partly of steel and partly of iron and the other from the Agricultural Implements Ltd. of Jamshedpur. From the evidence submitted by the former firm, the Tariff Board concluded that the competition of imported ploughs was not serious and that even if the duty on raw steel was increased to the extent they suggested, there was no reason for apprehension that the firm would be unable to hold its own.

298. The only manufacturer whose application was therefore, considered by the Tariff Board was that from the Agricultural Implements Ltd. at Jamshedpur, which is now popularly known as the " Agrico ". This company manufactured principally hand tools of the description mentioned above. Their works are well laid out and equipped with modern machinery. The total capacity of the plant at the time the Tariff Board reported was 4,000 tons of finished products per annum, but the actual production was only about 80 tons a month or less than a 1,000 tons a year. On the then output, the cost of production per ton was Rs. 767—excluding depreciation—whereas the wholesale selling price of similar foreign products in India was Rs. 710 per ton. The Board estimated that when full production would be reached, the cost of production would drop to Rs. 609 per ton excluding depreciation or Rs. 666 per ton including depreciation. The resultant difference between the selling price and the production cost with the plant working to capacity would yield a return of about 7 per cent. The Board maintained that the company was efficiently managed and if protection was at all needed, it was not so much as a permanent measure but as a temporary expedient to enable the company to get a foothold in the Indian market and increase its productive capacity.

299. Agricultural implements were then as now admitted free of duty but the articles produced by the company did not fall under this category but were subjected to an *ad valorem* duty of 15 per cent applicable to general hardware. The company asked for an additional duty of 20 per cent, making a total of 35 per cent, but the Board felt that there was not sufficient reason for granting protection to that extent. They, therefore, recommended that the prevailing *ad valorem* duty of 15 per cent should be raised to 25 per cent on picks, powrahs, kodalis and hoes, which in their opinion would be sufficient to enable the company to work to its capacity and at optimum economy. As the import records did not classify implements of this nature separately, the Board could not obtain trustworthy statistics of consumption from other sources and therefore, they were unable to estimate the burden on the consumer or the probable effect on the customs revenue. It was, however, their impression that the machine-made implements of the type produced by the company were too expensive for the ordinary cultivator and consequently, the additional burden of the suggested increase in duty was likely to fall on Railway, Irrigation Works, Local Bodies, Mines, Plantations, etc.

300. Though twenty years have elapsed since the Tariff Board made these observations, unfortunately, we are faced with the same difficulty in not being able to obtain any reliable information regarding the consumption of these hand tools in the country. The Government have so far not taken any measures to give in trade returns sufficient statistical data so that the import of these implements and their manufacture by such factories as the " Agrico ", Messrs. Kirloskar Bros. Ltd., etc. would provide us with reliable information to work upon. We must also point out that enormous quantities of hand tools particularly hammers are being manufactured, as they always have been, by the village blacksmiths, and cottage scale producers. These are mainly used by the agricultural community and unless the Provincial Governments undertake more detailed compilation of statistics to record the manufacture of implements in such small units of production, no accurate idea of consumption could be obtained. We merely indicate these facts here to show how difficult it has been for us to plan for the manufacture of hand tools to meet India's total requirements of the same, particularly when the tempo of agricultural and industrial development has to be accelerated manyfold.

301. *Current output and capacity:* Before the war, India was manufacturing approximately 10 per cent of her total consumption of small tools, the remainder being imported from abroad. This was mainly due to the fact that the manufacture of some simpler types of tools, particularly those used in carpentry and smithy shops, was hardly ever taken up, whereas in some of the items, particularly in the manufacture of picks and hoes and hammers, 90 per cent and 60 per cent respectively of the total demand in the country was met from within. Among the two hundred varieties of tools which the " Agrico " now manufactures, the following constitute important items of production :—

Picks,
Beaters,
Hoes,
Powrahs,
Hammers,
Plain Bars,
Axles,
Chisels,
Knives,
Crow bars,
Plough shearers, etc,

Manufacture of shovels was also introduced at a later stage and attempts are now being made to manufacture Tea and Coffee garden tools and other implements to work with agricultural machinery. The maximum capacity of Agrico plant when working in three shifts for manufacturing various kinds of hand tools is estimated as follows:—

TABLE No. 10.

Picks and Beaters	100,000
Hoes and Powrahs	150,000
Hammers	25,000
Octagonal Bars and miscellaneous tools ...	45,000
Shovels	30,000
	350,000

In Table No. 11 below, we give the actual annual production from 1939 to 1945-46:—

TABLE No. 11.

Year	Picks and Beaters	Hoes	Hammers	Bars	Miscellaneous	Total
1938-39 ...	3,26,933	8,14,001	79,067	71,307	6,859	12,98,167
1939-40 ...	3,70,993	9,71,209	1,68,731	1,67,896	19,302	16,98,131
1940-41 ...	6,24,092	13,97,489	1,80,149	1,54,551	44,881	24,01,162
1941-42 ...	7,79,504	11,11,256	1,63,096	2,00,112	1,48,223	24,02,191
1942-43 ...	7,97,127	12,25,792	1,00,268	50,713	2,89,373	24,63,273
1943-44 ...	9,38,848	17,85,824	1,30,353	92,893	1,70,912	31,18,830
1944-45 ...	9,22,059	16,94,360	59,077	92,528	3,05,166	30,73,190
1945-46 ...	4,00,195	13,44,590	2,69,192	1,21,517	3,31,763	24,67,257

302. The quality and finish of the hand tools manufactured by the Agrico, though limited in range, compares favourably with similar imported products. All tools manufactured are upto the British Standard Specifications and with the assistance of the Metallurgical Laboratory at Jamshedpur, suitable specifications of carbon tool steel have been evolved to give the tools maximum durability working under local conditions.

303. During the war the demand for picks, hoe and axes went up by leaps and bounds for the construction of military roads and aerodromes in the Middle East and S.E.A. With the assistance of the Government, four 200-ton Cleveland Presses were installed at this factory at Government's expense to meet this demand. The Agrico propose to take over these machines for the manufacture of tools to meet the post-war heavy demand for the various agricultural, industrial, road building, house construction programmes which are being planned.

304. The extent to which production has increased in this factory can best be measured by the increase in the labour strength employed there, which to-day stands at 960 as against 280 in 1938-39. This increase in the strength of labour is due to the increase in the number of shifts and the consequential increase in production. Up to 1938-39, the factory operated one shift only. In spite of this considerable increase in the number of employees, the industry

was feeling the shortage of labour owing to continued absenteeism when at one stage in 1945-46, it was as high as 25 per cent.

305. The company have told us that in 1938-39, they met about 90 per cent of the total demand of picks and hoes and about 60 per cent of hammers. Before the war, the production of these stores was also carried on a smaller scale by other manufacturers also. Worthy of mention here are Messrs. Kirloskar Bros. in Maharashtra and the Metal Industries of Shoranur in South India. During the war, several other firms also manufactured these types of hand tools under the aegis of the Supply Department, specially noteworthy of whom was the Kamani Engineering Corporations' factory in Lahore making hammers of all sizes, augers, vices, jacks, etc. Current capacity is about 20,000 to 25,000 hammers and about 5,000 augers per month. Their production of vices and jacks is estimated at 5,000 pieces per month. During the war, they supplied nearly a million pieces of hand tools valued at about half a crore of rupees. The Mysore Implements Factory at Hassan also manufactured these hand tools during the war, but the plant was primitive and about 90 per cent of the work had to be done by hand. Production per machine was very small and the fuel consumed for forging was considerable. The management admitted that their factory was working on a profitable basis simply because of war-time conditions. At present the factory consists of four power hammers and grinders and four spring hammers in the forging shop. These machines have already worked beyond their capacity and need to be replaced. One advantage which this industry enjoys is that the high carbon steel manufactured from charcoal iron at the Mysore Iron & Steel Works is particularly suited for the manufacture of hand tools. The Government of Mysore propose to reorganize completely this factory in the post-war period of which more will be said later.

306. *Target:* Fixation of a target of production during the first phase of the plan in the case of hand tools is perhaps more difficult than in the case of industries, we have hitherto dealt with in this Report. It is alleged by Tatas that their Agrico plant before the war met about 90 per cent of the total demand of picks and hoes and about 60 per cent of hammers. In the years 1938-39, the company manufactured 326,933 picks and beaters, 814,001 hoes, 79,067 hammers, 71,307 octagonal bars and 6,859 miscellaneous tools making in all 1,298,167 pieces. In a previous Table, we have already indicated that the augmented monthly capacity of the plant working three shifts a day is 350,000 units per month or 4,200,000 per annum. If the productive capacity of this plant alone is exploited to its optimum capacity by working it for full three shifts, it is capable of meeting an increase in the civilian demand for hand tools, three times greater than the pre-war demand. If the capacities of the plants in Lahore, Mysore, Kirloskarvadi and Shoranur and that of the recently started Praga Tools Corporation at Hyderabad are likewise increased, it would appear that India to-day has a capacity to produce the simple types of hand tools, which may be able to cope with the demand arising out of any large scale industrial or agricultural development. Apparent though this may be, we cannot but take cognizance of the fact that besides the major agricultural and industrial programmes, plans have already been formulated for the construction of roads, railways, canals, etc. Similarly, housing schemes on scales hitherto unknown have been planned by various provincial governments both for urban and rural areas with a view not only to alleviate scarcity of suitable accommodation particularly in large towns but also to meet the requirements of the increasing labour force which will be absorbed by new industries now growing up in large and small towns. Unfortunately, we have no data on which to calculate the number of hand tools that would be required to carry out these various projects, and therefore, we cannot say what productive capacity would be required to make India self-sufficient.

307. However, the problem is somewhat simplified by one fact viz., that machinery required for the manufacture of these hand tools is of a simple nature and such as can be installed quickly to produce about 500,000 units per annum. Again manufacture of hand tools could be taken up as a departmental activity of a major plant manufacturing agricultural and gardening implements. We understand that the manufacture of agricultural implements is being considered by almost all the provincial governments to meet the requirements of the peasantry. If this be the case, in the event of a shortage of hand tools of the type considered in this Report, their production could easily be taken up by such an implement factory.

308. In the absence of any tangible data, the manufacture of hand tools must be developed by stages. In the first stage, the existing factories must be permitted to put into operation their schemes of expansion so as to enable them to achieve maximum economy in production and bring their goods within the scope of the artisans and others who perform cooly work either on the farm, or on the rail road, or on the highways and byways, or on building construction. Secondly, production should be taken up in these provinces where indigenous implements have to be supplemented with imported ones to meet the demand.

309. In reply to our questionnaire, Messrs. Tata Iron & Steel Co. have indicated their plans for developing the " Agrico ". In the first instance, they have a short term expansion scheme to increase the present output by carrying out certain extensions particularly by introducing more Drop Stamps for increasing the output of hammers and by putting up new presses for the manufacture of shovels. Additional equipment required with the exception of two one-hundred ton presses, has already been ordered from abroad. Their long term expansion scheme will cover the manufacture of tools and implements required by tea gardens, rubber and coffee plantations and also those in demand in the Far Eastern countries and in East Africa. Among the new types of tools proposed are Heavy Hoes, Mangalore Powrahs, Hammer Head, Mammoties and Cheeling Hoes (for tea gardens). The management have felt the same difficulty as we are feeling in making these recommendations viz. the lack of any information regarding the increasing demand for these tools. At the moment of writing, there is considerable demand for hand tools, but it is largely due to the fact that the market had been starved for during the war years.

310. The manufacturers in Northern India, who have at present no power-driven forges and who are largely dependent upon manual labour propose to set up power-driven machinery and modernize their plant. This will enable them to produce goods of a better quality which is not obtainable at the moment and for which reason, imported tools are preferred by the consuming public. In their opinion, the current capacity in the country is sufficient to meet India's requirements of hand tools for some time to come and therefore, they do not propose to put into execution any long term schemes of major expansion

311. On the other hand, the Mysore Implements Factory in South India have submitted definite plans for expansion to the State Government. In the first instance, they propose to modernize their forging shop which at the moment is the most uneconomical section of their plant. They propose to incur an expenditure of over 2½ lakhs of rupees in purchasing machines including presses of 200 to 300 tons capacity, special shearing machine, hot milling and sawing machine, double forging and rolling mill, cold punching and shearing machine, air compressor, heavy duty hammers and one high capacity muffle furnace for heat treatment. They propose to spend over half a lakh of rupees on the grinding section, where at least 20 various types of grinders, in addition to those already in use are to be set up for grinding the edges of Mammoties, etc. They plan to spend over a lakh of rupees on the sheet metal section and about

two lakhs of rupees on the machine shop. They intend to manufacture other types of hand tools such as twist drills, files, carpentry tools, including cold saws and wood working machinery. Also other forms of hardware such as door and window fittings, metal fittings for water supply, pumps and pumping machinery for agricultural purposes, etc. Our purpose in mentioning all these facts here is to show how Government planning in this enlightened state could be usefully adopted by other Provincial Governments and States, where, if this industry has to be developed, it should form part of an Implement Factory where other products could be manufactured under the same roof, in different sections so that the overheads may be spread over the greatest possible number of allied products.

312. In the event of India's requirements of hand tools exceeding the productive capacity of the plants just described, we suggest that the production should be taken up in small scale factories of the type which the Mysore Government have established at Hassan and which they want to expand during the post-war period. Such plants in the first instance should be installed in the agricultural provinces as it would be necessary to bring under the same roof, the manufacture of agricultural tools and implements and carpentry and workshop tools. The desire to manufacture tools and implements for the local agriculturists and artisans would appeal immediately to other Provincial and State Governments as the type of industry which would help the well-being of the majority of the people who live on the land, work in the fields, build and repair roads, canals, houses, etc. but the success of providing suitable tools will depend largely upon the price at which they could be marketed. For this purpose, it would be essential for the Directors of Industries in the various Provinces and States to examine the feasibility of manufacturing the artisan tools at a price which would enable them to hold their own against tools manufactured in mass production factories. When the Agricultural Implements Co. Ltd.—"The Agrico"—appeared before the Tariff Board in 1924, the Board found that, with a production involving the use of 1,000 tons of basic steel, their costs were high and were about the same (excluding depreciation) as the price of imported products. The Board estimated that when full production was achieved consuming about 4,000 tons of steel, the cost would so come down as would enable the company to earn about seven per cent on their share capital, after allowing for full depreciation. To reduce production costs, the Mysore Implements Factory have planned to bring under the same roof, the manufacture of other products. So, if these tools are to be manufactured in small scale factories, we would advise the authorities concerned to consider the manufacture of other agricultural implements and tools, along with these artisan tools to make the factory a paying proposition.

313. Because, we have suggested that the existing large scale factories should be allowed to develop to their optimum capacity, it should not necessarily follow that they should be allowed to set up additional plants *ad libitum* but they should be allowed to put into execution their post-war expansion schemes by setting up such balancing units as would bring about optimum economy in production. In our opinion, it is desirable and essential that in an agricultural country like India, factories should exist in various parts of the country to manufacture implements and tools for our agricultural masses, but desirable and essential though this may be, it would be contrary to national well being if such a laudable purpose should be defeated by forcing the tiller of the soil and the artisan to purchase his tools at prices higher than would be payable, if produced on mass production scale. The setting up of a factory in any Province or State should, therefore, be undertaken only when evidence is tendered by prospective manufacturers that sound prospects exist for manufacturing and marketing tools at reasonable prices in such local factories.

314. We understand that there is a very large demand for implements of the type we are dealing with here in the neighbouring countries, particularly in the Continent of Africa and it would be advantageous for India to manufacture such tools on large scale and export to these neighbouring markets. The "Agrico" are seriously considering the possibilities of exporting their products and others would probably find ready markets for any exportable surplus production.

315. Our planning has therefore to be sufficiently elastic to provide in the first instance for the optimum development of existing units to meet indigenous demand to expand production if possible to cater for export markets. In case the unknown demand arising out of the various agricultural, industrial and public utility schemes necessitate setting up of further units, we recommend the types of unit which the Mysore Implements Factory propose to establish in the near future together with ancillary units to manufacture agricultural implements, tube wells, water pumps for irrigation schemes, etc. in order that they may be able to supply economically the needs of the masses in the Provinces or States where they are located.

316. *Government Assistance:—*

(a) *Raw materials:* The existing units draw their requirements of high carbon bars from the primary producers. The "Agrico" at Jamshedpur, Kamani Engineering Construction Co. Ltd. and Messrs. Kirloskar Bros. obtain their supplies from the Tata Iron & Steel Co. Ltd. and the Mysore Implements Factory from the Mysore Iron & Steel Works. There should be no difficulty in obtaining raw materials if more plants come into operation. A large scale factory of the type of the "Agrico" consumes approximately 10,000 tons of basic steel and it should not be difficult for the existing primary producers with their own expansion schemes to meet the requirements of two or three other factories. The manufacturers of hand tools in Northern India have indicated to us that they should get the raw materials at the same price at which the primary producers were supplying to their subsidiary and that, if the industry on the whole is to thrive, then all the units comprising it should have their basic steel at the same price.

317. When interrogated as to whether they could produce any evidence to show that basic steel was supplied to the "Agrico" at a different price than to any other buyer, we were informed that they had no definite evidence on the subject, but from the price at which the "Agrico" were able to market their products, they surmised that unless the raw materials were supplied at a more favourable rate, the "Agrico" would not be in a position to market their products at their current prices. We have since ascertained that Messrs. Tata Iron & Steel Co. Ltd. have been supplying basic steel material to the "Agrico" at the same price charged to any other customer, and therefore, if the "Agrico" are able to supply materials at rates at which others find it difficult to market their products, it is simply because the capacity and efficiency of their plant enables them to achieve economy in production. However, we agree as a matter of principle that all manufacturers of hand tools should be able to obtain their requirements of basic steel at uniform prices.

318. (b) *Cheap Power:* In regard to the supply of cheap power for the manufacture of hand tools, the existing factories are all happily situated. The type of units suggested for their manufacture during the first phase of the Fifteen-Year Plan are such as would not unduly burden the resources of companies supplying electricity for industrial purposes.

319. (c) *Technical assistance:* In the statement submitted to the Panel, Messrs. Tata Iron & Steel Co. Ltd. have indicated that "unlike labour in

other industries, labour in Edge Tool Industry has to be trained with great pains and when a man is fully trained, he almost becomes indispensable to the factory. The output of tools in "Agrico" is therefore dependent upon the presence of trained men and even if a few such men are absent, it makes a good deal of difference in the production of tools". Such being the experience of the largest producers of hand tools in the country, we feel it necessary that provision should be made by the Government to get a certain number of apprentices trained every year at the "Agrico" in order that other tool manufacturers can so maintain the quality of their production to compete with the best Indian made products and imports as well. The processes in the manufacture of such tools are few but require skill in operating the machines and therefore, we recommend that the required training should be imparted in the factories of the existing manufacturers particularly at the "Agrico" at Jamshedpur. If any of the firms desire to send their technical officers abroad for higher training, then the usual facilities should be accorded for such a training through the High Commissioner for India in the United Kingdom.

320. (d) *Protection to the Industry:* Under the prevailing economic conditions, the need for tariff protection to this industry has not been claimed by any of the existing units in the country. Tariff protection was not granted to the Agricultural Implements Manufacturing Industry because it was felt that the grant of such a protection might adversely affect the agricultural community and workers employed in the fields might be called upon to pay higher prices for implements such as powrahs, kodalis, etc. than would be justified under the economic conditions which existed then. However, the Tata Iron & Steel Co. Ltd. submitted to us on behalf of the "Agrico" that "should uneconomic competition by foreign concerns make it necessary, protection may be granted in such a form as will not increase the price to the agricultural consumer". We do not think any useful purpose would be served by our offering advice to the Government because under the existing circumstances, no protection to the industry is necessary and these conditions are likely to prevail for some time to come. Even if our anticipations are falsified by any attempt on the part of foreign manufacturers to dump their products, the door is always open for the industry to approach the Tariff Board at any time and we are confident that the matter would receive their immediate attention.

321. *Control of Industry:—*

(1) *Price:* What has been previously stated in the case of other industries may be reiterated here viz. that if basic steel is provided at low prices commensurate with the costs of production and not with imported price of foreign steel as suggested by the Major Steel Panel, then the benefits should be passed on to the consumers. We have elsewhere stated that the exisitng productive capacity in the country is capable of meeting the existing internal demand but owing to the prevailing shortage of raw material and transport the plants are not working to capacity and consequently a shortage is felt in respect of certain products of this industry. Therefore, the existing control of prices should continue until this temporary shortage has passed and the industry is in a position to meet the entire demand of the country. If imports are to be restricted or to be prohibited as stated further below, in order that the capacity of the plants may be fully utilized in meeting the internal demands, then the controlling authorities will have to exercise considerable vigilance to see that manufacturers do not combine or raise prices by other means.

322. (2) *Control of basic materials:* Control of basic materials for equitable distribution among the various manufacturers is not necessary under

normal conditions, because the quantity required by each fabricator is small as compared to the total output of the merchant and the bar mill material of the primary producers in the country. To-day, if the "Agrico" and other manufacturers are not receiving full requirements of the basic material, it is simply because these mills are not functioning to their capacity due to shortage of coal and transport, and the available quantity has to be rationed, equitably among the various consumers. We have, therefore, no particular advice to tender to the Government on this subject.

323. (3) *Exports:* Control of exports of the products of this industry is desirable and justified until such time as the total internal demand is fully met. This control is essential more than in any other industry simply because, the hand tools are essential to the mass of the country's population and it is imperative that the supply of powrahs, kodalis, hammers, crow-bars, etc. should be available to them at all times. Embargo on the export of tools can and should only be lifted when the capacity of the industry has increased beyond the country's needs.

324. (4) *Imports:* It is claimed that the existing productive capacity is enough to meet the total requirements of the country and consequently, imports should be prohibited. The Kamani Engineering Construction Co. Ltd. stated that in spite of the fact that they are able to market their products at the same prices as those of imported materials, preference by the consumers is given to the latter and therefore, they claim that no import should be allowed. If preference is given to imported materials in spite of indigenous manufacturers being able to supply their products at the same price, then it would seem that the imported products are more durable, made to standard specifications and have a better finish and appearance. We have not received this complaint from any other manufacturer. We are, therefore, not in favour of restricting imports of products which are consumed mainly by those living in the land and by those working on the roads, permanent ways, canals, etc. It is only when foreign manufacturers make an attempt to market their products at uneconomic prices that we think, control of imports should be considered and that too by protective duties, which would be imposed in the event of manufacturers being able to satisfy the Tariff Board. At the moment such conditions do not exist and we are neither in favour of protecting the industry nor of restricting imports.

325. *Sales Organization:* Before the war, the "Agrico"—the largest manufacturer of hand tools of the type dealt with in this Report—marketed their products through their own branches and agents. Since the termination of the war, their selling organization has been absorbed in that of their parent company viz., The Tata Iron & Steel Co. Ltd. Other manufacturers have marketed their products independently and we do not think that development of this industry has reached that stage when the existing arrangements should be disturbed.

CHAPTER X

EXPORT POSSIBILITIES

326. In the directive issued to the Panel, we were specifically asked to examine whether or not the industries with which we are concerned should cater for the export market and if so, whether they should be developed on similar lines to those adopted in Japan. Before making our recommendations, we shall review briefly some salient features of Japanese industrial development before the war.

327. The rapid rise of Japan as an industrial power before the war took place mainly during the two decades preceding World War II, when the established interests of older exporting countries were menaced by a competitor whose sales methods, prices, quality and variety of output were shattering. The structure of Japanese industry was so built as to permit large modern indsutries to work alongside cottage and small scale industries. She so linked up her large and small industries and so improved their production at least so far as the export market was concerned, they worked as partners and not as competitors. According to statistics compiled by the Tokyo Chamber of Commerce in 1931, small scale factories produced 18·5 per cent of the total output of cotton textiles; 28 per cent of woollen textiles; 55·1 per cent silk textiles; 27·4 per cent of hosiery; 29·1 per cent of hats; 91·5 per cent of pencils; 60·8 per cent of China-ware and 65·5 per cent of bicycles.

328. In 1932, the last year for which a census was published 13 per cent of all registered workers were in small industrial establishments employing from five to nine persons; 26 per cent in workshops employing from 10 to 49 employees; medium size industries employing from 50 to 500 workers besides absorbed a further 36 per cent leaving a bare 26 per cent for the large scale factories employing more than 500 workers.

329. Another important fact emerging from the study of the Japanese industrial structure is that gradually she ceased to be primarily a textile producing country and other industries such as metal, machinery and chemicals occupied positions of increasing importance. Twenty-five years ago, textiles represented half of the total Japanese output. In 1932, it was 37 per cent. The output of metal and machinery was 20 per cent and of chemicals 16 per cent. Together therefore, these two industries were as important to Japanese total production as was the textile industry.

330. Yet another point of importance to note in the build up of the Japanese industrial structure was that she was the home of "light industries" producing goods for the consumer in a country in which the heavy industries were relegated to a second place because of her shortage of raw materials. With the availability of iron ore and coal from Manchuria and Korea, her production of iron and steel products, machinery, instruments, etc., increased by leaps and bounds. Just before the outbreak of the war, 34 per cent of the machinery manufactured in Japan was produced in large factories; 45 per cent came from medium factories, and 17 per cent from small establishments. Conditions in the metal industry were similar. Of the "miscellaneous industries" manufacturing export goods on an extensive scale which were such a threat to world markets, only 12 per cent was produced in large scale, 52 per cent in medium scale and 36 per cent in small factories. A strikingly successful feature of this industrial structure was that the products of all these large, small and cottage

scale factories for export purposes had a uniform standard as far as quality, packing, etc., were concerned and it was rarely possible to tell in which type of factory particular goods had been produced.

331. Various reasons have been advanced for the survival of small scale factories in Japan. Chronic depression in agricultural occupations, coupled with imperfect factory legislation permitting exploitation of the workers have been suggested as causes. Widespread hydro-electrification of the country enabled small industries in rural upcountry areas to enjoy the benefits of cheap power, as well as the use of water-wheels for motive power,—the use of which doubled during the last twenty years—are other reasons. The small workshops were equipped with modern machines where power was available and with simpler though none the less effective types where water-wheels provided the motive power. The goods produced by these small scale industries, were as we have said, indistinguishable from the products of the large scale plants.

332. The Japanese Government greatly assisted the industrial growth of the country by making available overland and overseas transport facilities as public utilities, by offering concessional rates for transport of raw materials to and from any part of the Japanese Empire. Any loss arising out of so utilizing the transport services was made good by subsidies, bounties and loans to the Japanese shipping and shipbuilding industries and also to her railways. Again by the formation of co-operative societies, the Japanese Government made available the required capital for the small scale producers though dominating capitalists like Mitsui who with other financial magnates formed the Zaibatsu often contributed towards the capital of the small scale industries. In the industrial structure of Japan, small factories and even home industries became a part of this highly developed system, the workers in the small factories and even in the home industries were indirectly employed by these industrial combines and often these enterprises were virtually nothing but sub-departments of these combines, who made provision for the supply of raw material, working capital, etc. and took away the finished products for sale abroad along with those manufactured in large scale factories.

333. The question is to what extent could India employ an industrial structure on these lines for the consumer goods industries with which we are concerned. For this purpose we will briefly describe our own structure so far as it relates to the industries with which we are concerned. For centuries some hardware, hollow-ware, and hand tools were manufactured in this country by village blacksmiths, who made their steel in crucibles for the agricultural and building trades. Considerable skill was demonstrated in manufacturing the Indian Wootz steel and in the fourteenth and fifteenth centuries, knives manufactured in Moradabad and the steel blades manufactured in Golconda, which were subsequently turned into the famous Damascus swords, were fabricated by Indian craftsmen, whose descendants in modern times employ their traditional skill in the cottage industries of the country. With the import of products of iron and steel like bars, plates, sheets, etc., there grew up in towns small workshops which employed the traditionally skilled blacksmiths and tinsmiths; and the hardware and hollow-ware industries developed to meet the requirements of such consumers, who could not afford to purchase more expensive imported articles. In time and particularly after the last war, these industries utilized power machines on a small scale and produced utensils and containers. This group of industries, some of which were started under the guidance and supervision of the Directors of Industries, and their establishments, which were set up in various provinces on the recommendation of the Indian Industrial Commission (1916-18).

334. With the availability of locally produced bars, sheets, etc., from the primary producers, considerable large scale development took place in the manufacture of certain types of hardware. This followed with the inauguration of the Indian Steel & Wire Products factory at Tatanagar, making rods, wire and wire products for the first time in India. Messrs. Henry Williams Limited, who had for a long while restricted their activities to the rolling and manufacture of railway fittings and equipment in this country joined Messrs. Guest, Keen and Nuttlefeld to manufacture in India for the first time nuts, bolts, rivets, spikes, etc. With the increasing demand for metal containers for packing commodities of all sorts of food another world famous concern, the Metal Box Co. Ltd. of England formed an Indian company—The Metal Box Co. of India Ltd. who in 1933 commenced manufacturing tinplate containers on a large scale.

335. The development of the manufacture of hardware, hollow-ware, enamelware, cutleryware, surgical instruments, steel furniture and fittings made a tremendous advance during the war. Though the tempo of war preparation was slow, prior to the fall of France, considerable activity had taken place in the manufacture of these steel products. With the fall of France and with the necessity of meeting the increasing demand of the Armies in the Middle East, supplies had to be obtained from all branches of the industry whether large scale, small scale or cottage scale. With the entry of Japan into the war, steps had to be taken to import machinery and equipment for expanding the manufacture of nuts, bolts, rivets, wire, wire products, containers, cutlery, building hardware, surgical instruments, etc. Thanks to the efforts of the Supply Department in these directions in the production of these articles reached a stage of development at which, with an assured supply of basic raw material and with the assistance of Government, the post-war development of these industries by all the three classes of producers can be so increased that it will be able to meet not only internal demands but also those of neighbouring countries.

336. We, therefore, have in this country the nucleus of an industrial structure for the development of these industries in the post-war period more or less on the same lines so successfully adopted by Japan. We could with certain modifications adopt the Japanese structure to suit the particular needs of this country. Bare subsistent wages and longer hours of work were undesirable features of the Japanese pre-war industrial machine. Under no circumstances, can they be considered suitable for adoption in the planned industrial development of this country, which is essentially based on raising the standard of living of the working class people employed either in agriculture or in industry.

337. In Chapter I, we have stated that one of the basis of our planning for the five years is to make India self-sufficient in meeting the entire internal demand for the products of the industries with which we are concerned. That should not preclude us from considering and planning for the export of these steel products to countries, where India has a geographically advantageous position. As pointed out by the other Panel dealing with the basic steel industry, between Northern Europe and Australia, India is the only large scale producer of iron and steel with the exception of South Africa, while in the Far East, Japan will cease to be a steel manufacturing country for many years to come. As far as the steel industries with which we are concerned, India has a great opportunity to sell their products in the markets of the British Empire in East Africa, Egypt, Palestine, Iraq, Persia and on the other side in Burma, the Strait Settlements, Java, Sumatra and in South China including Hong Kong. To-day India is the cheapest producer of steel in the world so that the processing industries with which we are concerned should be in a position to obtain their basic raw material at the lowest possible price. This for reasons fully discussed in the Major Panel Report is not the case. If this weakness is corrected and their

planning is carried out on the lines indicated, then India will have a unique opportunity of supplying cheap steel goods in markets where Japan and Germany particularly the former, had complete control. We admit the necessity of making the country self-sufficient but must emphasize strongly the necessity of extending our markets in foreign countries, for a reason which forms an important basis of the post-war industrial planning of this country.

338. If we are to raise the tempo of our industrial production so as to double the national income, within a period of fifteen years, then the existing industrial production must be greatly increased during the first five years of the Plan. Such a development would require the installation of a large volume of machinery and capital equipment, which would necessitate large surpluses of purchasing power in foreign countries. This could only be created by a favourable balance of trade wherein exports of Indian goods, particularly manufactured goods must create a balance of payment in favour of India. This can only be achieved by export of the products of such industries where India has a natural advantage in respect of the availability of raw materials and the low cost of production. Two particular industries have so developed in this country that their products can always find markets in the countries mentioned above and we feel it imperative that steps should be taken to fill up these markets with the products of these industries from any surpluses that might remain after the saturation of demand in this country. These two industries are cotton textile and steel.

339. The significance of what we have stated can best be realized by an examination of what was achieved by Japan in this direction, in order to build up the phenomenal industrial structure she did before the war. The industrial leaders of Japan were always, "export-conscious". The figures of export and import published three times a month by the Tokyo Chamber of Commerce were anxiously discussed by the general public. A slight decline in export over a ten days period caused widespread criticism in Japanese Press, as was well-known to those who were trading in that country. In 1934, which was the last year, when any official statistics were obtainable about the Japanese industrial production and about her export trade which was discontinued with the "China Incident" Japan was exporting industrial products five to six times above the 1914 figures.

340. If we take 100 as the index number for 1914, then in 1920, the index figure was 210; in 1928—254; in 1932—325; in 1934—555 a phenomenal rise. Industrially competitive goods were an increasingly important item in the foreign exports, particularly in later years. In 1928, these goods represented 50 per cent of her total export; in 1934 i.e., with a period of six years they represented nearly 75 per cent. Textile and steel originally headed the list of Japanese exports. But during recent years "general industrial merchandise" including enamelware, cutleryware, nails, scientific instruments, lamps, toys, etc., exceeded the exports of textiles. In 1932, "non-textiles" represented only 37 per cent of Japanese total exports; in 1933, non-textiles were 41 per cent; in 1934 they rose to 46 per cent.

341. What is most significant from our point of view is that in 1934, the last year for which detailed statistics are available, the British Empire imported 44·6 per cent, the Dutch Empire 16 per cent, the U.S.A. markets 12·8 per cent; China 9 per cent and the rest of the world 17·6 per cent of the total exports of Japan. Among the markets of the Empire, British-India alone imported approximately half of the Empire's total share. The rest of the Empire's total was taken by countries east of Suez. It may also be noted that Japan's trade balance with Canada, Australia, New Zealand and British Borneo was unfavourable to her. All the other countries in the Orient, where she had a favourable balance of trade are in closer proximity to India. As

there is little possibility of any Japanese or German goods entering in these markets for many years to come, and as the prices at which they could be imported from European and American countries should be comparatively more expensive, India has in these export markets, east of Suez, an outlet for the products of her consumer goods industries.

342. At the request of this Panel, the Industrial Adviser to the Government of India invited reports from our Trade Commissioners in East Africa, Persia and Egypt, and we quote from the Report of our Trade Commissioner in East Africa, to indicate what favourable conditions prevail there for export of Indian goods. The Report received from our Trade Commissioners in Egypt and Persia portrayed similar conditions.

343. "East Africa has always been a natural market of India owing to its proximity and the character and economic life of her people. With the elimination of Japan and Germany as potential competitors for Indian manufacturers on the East African market, the day has dawned for India to come in possession of her natural inheritance. It is of the utmost importance and it should be realized that this opportunity which embosoms vast and far-reaching potentialities in the future economic prosperity of India, should not be allowed to slip by for want of forethought and action. Very few countries can perhaps provide a more stable market for Indian manufacturers than the African territories, particularly East Africa. Since after the start of hostilities there have been changes of great magnitude in the economic conditions of the East African territories. The African has seen, heard and learnt in six war years more than he would have done in thirty normal years. This means that he will require more and better articles. The quantity of lower grade goods will not be materially affected because the lowest strata which practically purchased very little will replace those who did in the low prices class while those who did buy low priced qualities before the war, will demand better goods. The scale of wages, earning power in general, production and political status have also advanced. Broadly, therefore, the manufacturers abroad can look to a higher and increasing demand for trade goods."

344. "A proper gauging of the world position leaves no room for doubt that there is a feverish bid for East African market for manufactured goods from all directions, particularly so as this is the right moment to fill up the wide gap left by the two powerful commercial nations Japan and Germany who had established unchallengeable commercial sway in these territories in spite of all efforts to counteract this by means of judicious propaganda and publicity in favour of the United Kingdom and Empire manufactured goods."

345. "In war-time, India was called upon to produce and export to this market almost, anything and everything from textiles to matches, combs, glassware, crockery, cutleryware, hardware, and bakelite goods, which she herself used to import in pre-war time. Frankly speaking, it cannot be denied that the export trade from Indian side of the ocean was not handled in a manner compatible with business integrity and decorum or with a view to build up and consolidate an export market where the Indian retailer predominates and which had all the advantages ideal for any country with a desire for export trade. It is admitted that there were production and shipping difficulties and hordes of other, but I cannot see any reason for the lack of standard qualities, short weights and measures, high prices by snowballing and other means. However, at present, there is a marked difference for the better and, if pursued zealously, there is no reason why confidence should not be established."

346. The facts indicated above regarding Japanese export trade and the extract from the Report of our Trade Commissioner in East Africa make it

sufficiently clear that the time is come particularly now for India to enter into these markets when trade conditions in other countries are so unsettled to capture business which has been lost to Japan and Germany. We, therefore, feel that it should be a cornerstone of Government's industrial policy to see that at least "general industrial merchandise" including products of the industries in the development of which we are concerned are exported to those markets. These industries are such that given the type of assistance which we have described, they could create employment for a large number of people in the manufacture of the products on large, small and cottage scale basis.

347. Having established that possibilities exist for Indian products to find a place in the markets east of Suez, we must again emphasize that penetration on foreign markets should be actively taken up only after demand in this country is fully satisfied. In no circumstances should export be permitted merely because of very high prices prevailing in foreign markets, unless and until the requirements of the consumers in this country are met. It would be an undesirable feature of our industrial economy if goods, particularly consumer goods of the type dealt with in this Report, are allowed to be exported when they will be particularly required in the development of other industries and for putting through the vast schemes of housing, irrigation, etc. whose development has likewise been planned. It is only when the dealers stocks in this country are replete, which will satisfy the increasing demands of the consumers and when surpluses are available, that they should be allowed to move out of this country and find their place in foreign markets.

348. Such conditions could be brought about in two or three years and so, during the interim period, we would like the Government to carry out thorough investigations through our Trade Commissioners in the markets east of Suez, about the type of products which consumers in those countries desire, their quality and prices, etc. so that all the commercial information is readily available when the industries concerned are ready to enter the export market. Plans should be made to work out the most suitable marketing methods. Whether marketing should be left to the large merchant houses in the ports, who have their branches in foreign lands or whether it should be left to individual firms or association of such firms, are matters which can only be dealt with after the industries are developed on certain well defined lines. We have indicated that the sale of some of the products in foreign countries might be left to the sales organization which the Iron & Steel (Major) Panel have recommended for the basic steel industry. In the case of industries which are likely to be developed on a small scale such as the manufacture of domestic hardware, cutleryware, surgical instruments, etc. we submit that the Directors of Industries in the various Provinces and States interested in their development, should assist the small scale producers by creating a co-operative marketing organization or by bringing about an Association of Manufacturers, who should themselves form a sales organization to market their products abroad. It is only by setting up such an organization or by leaving export trade in the hands of merchant houses, who are known in the foreign markets for their business integrity and acumen that we will be able to export goods of quality at reasonable prices, which alone will give a permanent place to Indian products in foreign markets. No endeavour to establish market abroad would be successful if individual firms with very limited resources try and capture whatever trade they can, by reducing the quality of the output to allure the foreign buyer by cheap quotations. The reports from our Trade Commissioners already indicate that some such attempts have been made in the past with the result that many of the products of Indian industries have gained a bad reputation or have been superseded by goods imported from other countries even at a

higher price, because products of reliable quality have been regularly supplied. These are matters which must receive the attention of the Departments of Industries in the various Provinces and States.

349. Standardization of production and the quality of the products are matters in which the Departments concerned should actively interest themselves for the benefit of the Industries which are likely to be set up in the various Provinces and States. What was achieved in this direction by the Supply Department and the Controller General of Inspection during the war shows what can be done. Already British Standard Specifications and Indian Government Specifications exist and it should be made incumbent upon the various industries, if necessary by legislation to produce goods to prescribed standards only, whether they have to be marketed in this country or abroad. In the initial stages, it may be difficult to persuade or enforce manufacturers to do so, but if they do not then they will lose forever the possibility of selling their goods abroad in what will undoubtedly be highly competitive markets.

350. So, to sum up, there is definite scope for the products of the industries with which we are concerned to enter markets east of Suez. In our opinion, it is essential that India should take her proper place in the export markets of countries for which she is geographically best suited to supply her products. That this is a desirable object from the point of view of national well-being cannot be denied. Equally it cannot be denied that until Indian internal requirements are fully met, any attempt to export our products should be discouraged. Some time must lapse before such a condition can arise and so, during the intervening period, we advise the Government to explore all market possibilities, make the information available to the industries and arrange for standardization of their products. In the interim period, if any industry or unit thereof, desires to market its products abroad, having satisfied the authorities concerned that the indigenous demand has been fully met, it should be authorized to do so, provided adequate measures have been taken to see that quality conditions have been satisfied. In the event of reports being received from our Trade Commissioners that goods of inferior quality are being marketed, then legislative measures might be taken to safeguard and promote India's commerce with her neighbouring countries.

351. It would be of the greatest value if the Government of India in the Commerce, Industries and Supplies Departments invite the Directors of Industries in the various Provinces and States interested in the development of Iron & Steel (Minor) Industries to formulate an all-India plan for standardizing and marketing the products of these industries. We are fully aware of the constitutional difficulties in this respect, Industry being mainly a transferred subject and every Province being entitled to take independent action. Nevertheless, we feel that until some general and fundamental conditions are agreed, by all the Provinces and States concerned, the possibilities of entering into export markets must be limited. Standardization of products and their marketing through proper channels are matters on which there should be no difference of opinion prevailing among the people who are interested in the development of industries, whatever Province or State they represent. It would be to the advantage of the industries concerned if immediate steps were taken by Government to investigate the requirements of the export markets and help the industries concerned to the position where they can offer quality goods at competitive prices. It is only then that export possibilities can be converted into realities.

APPENDIX A

MEMORANDUM FROM SHRI N. N. RAKSHIT ON LABOUR AND INDUSTRIAL DISPUTES

1. Our colleague Shri N. N. Rakshit desired that we should write a separate chapter on problems relating to labour employed in the various industries dealt with in this Report, but we feel that the post-war labour problems are not patent to these industries alone but they have become a feature of the industrial and social upheaval throughout the world and their solution demands not only nationwide considerations but international as well. The Labour Department of the Government of India have been carefully examining these developments and our National Government have been prompt in bringing forward suitable legislation for consideration by the Legislative Assembly. As this matter is going to be settled on nationwide basis by the accredited representatives of the people and their Government, we do not think it necessary to write up a new chapter. We, however, are in general agreement with what Shri Rakshit has stated in his memorandum and therefore, we have decided that it should be attached to this Report in the form of an Appendix so that the authorities concerned might know that they have our full support for the contemplated legislation, to remedy the evil effects of their post-war industrial upheaval and to bring about more harmonious relation between the employer and employees in our industries.

2. " The present relation between employers and employees in Indian industries, as estimated by the large number of strikes and disputes in recent times, is far from satisfactory, and it may ultimately develop into a grave problem in India's National Economy, if serious efforts are not made now to make a sound and proper settlement after a thorough investigation into all aspects of the question. India to-day is on the threshold of vast industrial developments, and it will be extremely unfortunate if she fails to get the loyal and willing support of a strong and efficient labour force in this most critical period of her industrial history. It is therefore essential that the problem of industrial disputes should be studied in its entirety with great care from every point of view, and instead of individual patch work remedies by conciliation boards, some uniform general principles regarding some of the most important points of dispute such as minimum wages etc. should be established and enforced by legislation for the guidance of industrial employers and workmen.

3. "It is fortunate that the question has already attracted the serious attention of the Government of India, who are already trying to evolve a more rational labour policy based on definite principles with regard to such important question as health insurance, minimum wages, working hours, etc. and there is hardly any doubt that such measures will greatly improve the position of the working classes and also succeed in removing same and the main causes of conflict.

4. "But there are reasons to believe however, that these legislations for the benefit of the working classes will not be able to make a final solution of this problem which is more complex than is generally supposed, for though essentially economic, it is in a large measure political. While it is undesirable that industrial disputes are often the result of real grievances of workmen, it will be a mistake to suppose that this evil can be remedied merely by labour legislations allowing greater amenities to industrial workmen. Labour troubles in our country are not the result of the exploitation alone of workmen by industrial employers, but also of the political activities of various parties who are trying to gain political power through labour movement. In order to retain their

hold on working classes, these political parties vie with one another in inciting workmen against their employers, and make them resort to strikes on the slightest pretext.

5. "It is because of these political forces or influences that a proper solution of the problem has become so difficult and it can perhaps be safely asserted that if strong and adequate steps are not taken by Central Government to control and counteract such political influences, India will never be able to mobilize a strong loyal, and efficient labour force to build up her industries.

6. "In shaping their labour policy and enacting necessary legislative measures, Government should take the following points into their careful consideration :—

(a) Government may, by legislation, compel industrial employers to give greater amenities to workmen as regards wages, working hours, etc., but where is the guarantee that workmen will, in return, render honest, willing and loyal service. It is a common experience of industrial employers that in case of a dispute, even when the demands of workmen are fully met, they do not always co-operate honestly with employers by giving sincere and efficient service. To guard against such insincerity on the part of workmen, Trade Unions, etc., labour organizations should be made responsible for the conduct of the members and labour legislations should be made strictly binding on workmen as well as employers.

(b) The policy of appeasement of workmen's demands should be pursued with extreme care and caution, because increased rates of wages are raising the cost of production in all Indian industries.

As most of the industrially advanced countries of the world are gradually returning to normal peace time production, Indian industries are likely to face severe foreign competition, in near future. In these circumstances, it is essential that production in Indian industries should now become highly efficient so as to reduce the cost of production to the minimum. This vitally important fact should never be lost sight of in determining the wages of workmen whose present practice of making omnibus demand must be severely checked. If Indian industries cannot now produce standard quality articles at cheap cost, they will have to lose the ground they had won during the war.

(c) Care should also be taken to see that the interest of consumers are not injured by the high wage rates allowed to workmen. High wages and other amenities to workmen are resulting in the rising prices of commodities and consumers are being made to suffer.

(d) The Government's attempt to alter the Factories Act so as to bring even the small industries within its scope, is very likely to prove harmful to the small industries because certain special economies peculiar to small industries will disappear if they are to conform to the stipulations of the Factories Act. Conditions in small industries are so different from those of the large industries that the same principles cannot be applicable to both of them. It is therefore advisable that special provisions for the benefit of the small industries should be incorporated into the Act itself so that the small industries may work satisfactorily.

(e) Special machinery should be set up by the Government for the settlement of industrial disputes. This machinery will consist of various Boards for different industries, and these Boards will be composed of men equipped with expert technical knowledge of the manufacture and costing of the particular industry. In case of a dispute, the balance sheet of the company concerned should be carefully examined by the Board, who after taking into account, the production and other expenses, and the profit made by the company, will decide how far the demands made by workmen can be conceded without injuring the legitimate interests of shareholders. The decision of the Board will be final and will be equally binding on both the employers and employees.

7. "While there can be no two opinions about the necessity of improving the condition of working classes in this country, it will never do to forget the one central fact that in order to maintain their existence against foreign competition, production in Indian industries must become economical and efficient, otherwise such industries will not only become a heavy burden to the nation but will be ultimately crushed out of existence by powerful foreign manufacturers. It will be a sad mistake to suppose that inefficient industries can for all time to come be protected by tariff walls. Powerful foreign manufacturers have already taken advantage of the loop-holes in the tariff policy of the Government and have started their branch organizations in India. Indian industries can never expect to live and thrive, if they do not come on a par with foreign industries as regards efficiency and cost of production."

APPENDIX B

EMPLOYMENT OF FOREIGN CAPITAL

1. According to one of the terms of reference, we are required to report about the nature and degree of co-operation with foreign firms both in respect of capital and management. This again, is a subject on which we have not thought it advisable to write up a chapter, considering the nature of industries with which we are concerned and the amount of capital involved in their development.

2. As far as the participation of foreign firms in the management of these industries is concerned, we think it is a matter which should be left entirely in the hands of the industrialists concerned, who are the best judges of the degree to which foreign participation in the management may be allowed, which will not jeopardise their own control of the industry. It may be that patented processes have to be introduced in some of the industries and it may be that technical personnel to work these patented processes have to be engaged from the patent owning companies abroad, for which it may be necessary to pay royalties, etc. but these are matters on which action can best be taken by agreement between the patent owners abroad and by the industrialists in this country.

3. In regard to employment of foreign capital, we are of the opinion that considering the small amount of capital required for the development of various industries discussed in this Report as compared to what is required for other industries, it could be easily raised in the country and therefore, indigenous capital should only be employed hereafter. In our opinion, for the safe and unhampered growth of industries both large and small in this country, it is essential

that unrestricted employment of foreign capital in India should cease as early as possible. The old recommendations of the External Capital Committee should now be revised, and a fresh Enquiry Committee should be set up to investigate how far and under what conditions, foreign capital can be allowed to enter and be employed in India. In view of the possible danger from industries organized by powerful foreign capitalists in this country, it is necessary that conditions should be imposed to restrict the inflow of foreign capital into India, in order to safeguard the interests of Indian-owned Industries. Government will have to device methods by which this inflow of foreign capital may be regulated so as to give the children of the soil, optimum scope for the progressive development of their country and the exploitation of its material resources for the benefit of the nation.

4. Our colleague Mr. H. Chiswell-Jones disagrees with us as he holds different views than those expressed above, and his dissenting note on the subject is submitted hereunder :—

> " The question of employment of foreign capital in countries needs very careful consideration for while it is only natural that Governments should wish that all industries be financed by their own Nationals this can retard economic progress. In 1943, one of the leading financial weeklies of Great Britain stressed the fact that no country has a monopoly of brains and urged that American companies be encouraged not only to set up their own factories in Britain, but be controlled by them. This is the realistic outlook on a problem often clouded by nationalistic ideals.
>
> "It is apparent that the development of new ideas coming from abroad should be given every freedom for any attempt at restriction, whether in the financial or managerial field, will automatically retard the economic progress of any industry. Co-operation not restriction, should be ideal, for by this means partnerships will be built up which will endure and which cannot fail to bring increasing efficiency and prosperity to industry." (Sd.) H. Chiswell-Jones).

Mr. Chiswell-Jones has agreed with us on all the points on which we have tendered advise to the Government in this Report excepting the subject matter of this Appendix.

SUMMARY OF THE REPORT OF THE IRON & STEEL (MINOR) PANEL

Chapter I—Introductory

Chapter II—Basis of our Planning

In India, which has yet to go a long way in building up her industries, particularly the basic ones, the small scale and cottage scale industries have enjoyed a preponderant importance in the country's economic growth. The Indian Industrial Commission, which carried out the first official enquiry in 1916-18 on the development of industries in this country on systematic and scientific lines, has sufficiently stressed the need for developing our industries on (1) large-scale, (2) small-scale and (3) cottage scale. Even in the future economic structure wherein State planning is to play a more prominent role, development on these scales has to continue, if opportunities for increasing employment are to be provided in the various regions of the country, where opportunities are so scarce to-day, owing to the concentration of Industry in certain large towns and ports.

2. Unless this is done even after the creation of the capital goods industry, which involves employment of comparatively less labour than the consumer goods industry, it is not unreasonable to expect a large volume of the Indian population to be left without work, unless small scale and cottage-scale industries run *pari passu*, and are linked up with large scale enterprise as in Japan. So, the first basis of our planning is to see that the development of the industries with which we are concerned is so planned as to give the large scale, the small scale and the cottage-scale producers, sufficient scope to run their business on healthy lines and to ensure their growth in various regions, which would result in wider diffusion of purchasing power and creation of large internal markets for the products of these industries.

3. To enable the capital resources of the country being utilized in initiating as many schemes as possible of industrial, agricultural and social development, it has been emphasized by the Iron and Steel (Major) Panel that the price of basic steel be fixed at a level at which the primary producers may sell their products at a reasonable profit which would encourage the consumers of steel, to make as much use of its as possible. We have accepted this basis in our planning also and have made certain recommendations, so that " if basic steel is to be made available at the cheapest price to the producers engaged in the industries in the development of which we are concerned, then the benefits arising out of the low cost of the basic materials should be passed on to the consumers of their products."

4. That India should be made self-sufficient in meeting the entire demand for the products of the various industries with which we are concerned, is another important basis of our planning. That in so doing, no monopolies are to be created or a combination of manufacturers be brought about, who by withholding supplies, or by arbitrary fixation of high prices, deprive the consumers of steel products of the benefits of low cost basic steel. (See paras 21 and 22).

5. Lastly, we have considered the possibilities of development of the industries with which we are concerned on lines similar to those on which they were developed in Japan and the possibilities of exporting the products to markets east of Suez.

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Chapter III—Wire, Wire Nails and Other Products

6. The average import of wire and wire nails excluding the fencing wire and wire rods during the quinquennium 1935-40 was approximately 21,000 tons per annum. This, coupled with the indigenous production of about 25,000 tons per annum, indicated an approximate consumption in this country before the war of about 45,000 tons per annum. During the war, the capacity of the two large scale producers was increased, and new sources of supply were also developed by small factories from new small suppliers. Therefore, the total current capacity of the indigenous producers is to manufacture 29,300 tons of wire and 16,480 tons of wire nails, making in all 45,780 tons. Against this, the actual output during the five years 1940-45 was, on an average, 25,460 tons. This was due to lack of coal and transport facilities and the inability of the small manufacturers to run their mills efficiently owing to the very improvised nature of their equipment.

7. Our estimates of the future demand and the target of production have been based on new factories which are likely to come into prominence with the execution of the 15-year plan, and it is not based on conditions prevailing before or during the war. The post-war development schemes of the Central and Provincial Governments, the requirements of the post-war armed forces and the possibility of export have all been considered. The Major Steel Panel

sought the information from the principal departments of the Government of India, the Provincial Governments and some of the major States. We too asked the Directors of Industries in the various provinces and Indian States how far they were interested in the steel processing industries. As most of the schemes exist only in broad outline, only a general idea of the nature and extent of the demands is indicated.

8. In fixing the target for the processing industries based on steel, we were faced throughout with a very difficult problem in assessing the potential demand, as none of the Planning Departments of the Government were able to state, and for good reasons too, what their requirements of hardware would be. We have, therefore, arrived at our target on the following lines :—

> The pre-war consumption of wire and wire products was about 45,000 tons per annum. During the last six years, more than 60 per cent of this pre-war consumption was diverted into war channels, which demand will have to be met during the post-war period, and the back-log has been estimated at about 216,000 tons of wire, and if this demand is to be met during the first five years of the plan, then, the total consumption in the country would increase by another 43,000 tons. This back-log of demand may not materialize to the extent expected and, therefore, we agree with the other Panel that only 50 to 60 per cent of the demand may arise during the first five years of the plan. This, coupled with the demand arising out of the Government sponsored post-war schemes and heavy building programme for industrial and housing requirements, has led us to believe that a production target of 100,000/110,000 tons per annum would not be an over estimate. To obviate any danger of over or under productions, we suggest that our recommendations may be put into execution by stages.

9. The post-war development of this industry is based on the expansion of the existing unit to achieve their optimum production and the creation of new ones. The Indian Steel & Wire Products Ltd. plan to install a rolling mill plant with a capacity of 175 tons of wire rods per day of 8 hours. If worked full three shifts and throughout the year, this would result in production of about 175,000 to 180,000 tons of wire rods and/or M.S. Bars below ½", per annum. As we require only 130,000 tons of wire rods, the firm plan to manufacture approximately 75,000 tons of wire rods and the balance as reinforcing rounds. They propose to raise the production of wire nails from 14,000 tons to 21,000 tons and of galvanized and hard bright annealed wire to 7,000 and 14,000 tons respectively. In addition, they plan to make 4,000 tons of barbed wire and 3,000 tons of special wire. They further went to utilize about 20,000 tons in the manufacture of umbrella ribs, chains, wire netting, wire mesh, B.R.C. fabric, etc.

The National Screw & Wire Products Ltd. plan to expand their capacity from 1,200 tons of wire and 850 tons of nails to 2,500 tons of wire and 1,500 tons of nails. They also propose to erect a small plant for the manufacture of umbrella ribs.

The Indian Steel Rolling Mills at Negapatam have an idea of raising their productive capacity to 60,000 tons, of which they propose to manufacture 7,000 tons of wire, 12,000 tons of wire nails and 2,000 tons of chains, making in all 21,000 tons. The remainder of their capacity, they propose to re-roll into bars from 3/16" to 2¼", for the production of which this Panel is not concerned.

The Hyderabad Steel & Wire Products Ltd. propose to manufacture 225 tons of wire nails, 75 tons of wood screws and 625 tons of bolts, nuts and rivets. They have also schemes for manufacture of hoops for cotton bales and steel and non-ferrous metal castings, with the production of which this Panel is not concerned.

The Mysore Iron & Steel Works of Bhadravati propose to manufacture 10,000 tons of wire, 3,000 tons of wire nails, 6,000 tons of bolts, nuts and rivets and washers and 1,000 tons of woodscrews.

Majority of these schemes exist only on paper. No adequate data was available to the Panel to indicate whether they were feasible or not.

10. It has not been possible for this Panel to obtain expert advice within this country as to what would be a minimum economic plant to produce wire and wire products. So, we asked the Government of India in the then Planning & Development Department to obtain the required information from abroad through a firm of Consulting Engineers, but unfortunately adequate information has not been received at the time of writing this Report. Difference of opinion prevailed regarding the size of unit, and it was maintained by some that units capable of manufacturing 5,000 tons per annum in the first instance, which could be raised to 10,000 tons later on, could manufacture these products at a reasonable cost. On the other hand, others including our colleague Sirdar Ajaib Singh maintained that even a unit of the type of the Indian Steel & Wire Products Ltd. could be described as the most economical unit.

We have asked the Government to ascertain from experts abroad details of the difference in the conversion costs of wire and wire products by small units as compared to large units. Should the difference be negligible, 5 units of a minimum capacity of 5,000 tons, which could be raised to 10,000 tons, may be erected one each in the Madras and Bombay Presidencies, one in the Punjab and one each in Hyderabad and Mysore States. In the event of the expert opinion deciding on the installation of only one unit to take up the production of 25,000 tons of wire and wire products, we recommend that such a unit should be installed at a site in the Madras Presidency recommended below.

11. Our reasons are :—

(a) The Indian Steel & Wire Products Ltd. would look after markets in Northern India, and so a plant in South India, situated on the broad gauge system of railways midway between the port of Negapatam and Bhadravati can look after markets in South India and on the west coasts right up to Karachi.

(b) A Works situated in South India would make it unnecessary to install a re-rolling mill to produce wire rods, as these could be purchased from the re-rolling mill at Negapatam and from the Mysore Iron & Steel Works, Bhadravati. This would result in a considerable saving in capital cost, and would also enable the Madras Government to implement its industrial policy.

(c) It would enable both the works at Negapatam and Bhadravati to find a ready market for 10,000 to 12,000 tons of wire rods each. We are averse to the primary producers of steel taking up the production of finished products, which fall rightly within the sphere of secondary steel industry, and so our proposal would enable the Mysore Iron & Steel Works to go in for manufacture of wire and wire rods and not of wire and wire nails. We have recommended that both the factories at Negapatam and Bhadravati should be allowed to participate in the share capital required for this plant.

12. If five plants are to be erected, then one in the Madras Presidency should be erected at Negapatam for economic reasons, in preference to any other place in the Presidency, but if this does not meet with the approval of the Madras Government who desire to start new industries in different districts of the province, then an alternate place might be either Madras proper or any destination on the broad gauge line of the M. & S. M. Railway within a radius

of about 120 miles of Madras. The plant in the Bombay Presidency should be located at a site in greater Bombay, or within easy reach of that part. The third plant to be installed in the Punjab should be between Shaharanpur and Lahore, and the fourth plant should be erected in the Hyderabad State by the Hyderabad Steel & Wire Products Ltd. We recommended that the last named should proceed with their scheme on the basis of using locally manufactured rods and billets, arrangements for the supply of which have been planned by the Major Panel, because we agree with them and the British Re-Rolling Mill expert, Mr. J. M. Black, whose expert advice was sought by the Government, that mild steel manufactured in electric furnaces, would be too expensive. The fifth plant should be installed in the Mysore State at a suitable site on the broad-gauge system of railways near enough to Bhadravati Steel Works.

13. The above expansion programme should be put into execution only in the event of the demand for wire and wire products increasing as envisaged. This demand will increase only by stages according to how the various industrial, agricultural and building schemes come into operation. We feel that quite for sometime to come, the existing units will be able to cope with the demand for wire and wire products. It is only when the demand so increases, as would necessitate the import of these products, that new units should be allowed to come into existence. In case five units are to be installed, they should be done by stages and in regions where increasing demand and distance from the existing plants, justify their erection.

The manufacture of wire ropes, wire chains, wire mesh, wire fencing, B.R.C. fabric, etc. require the use of complex machines, and manufacturers abroad have patented their processes. The Indian Steel & Wire Products are negotiating for import of such patented plants on payment of royalties. We welcome this plan for establishing in this country new industries to be started under foreign technical guidance by local people, who already possess considerable knowledge and experience of the industry. When these plans take more concrete shape, Government should examine them and authorize their execution provided no monopoly is created.

14. *Government Assistance.*

(*a*) *Supply of raw materials :* From the Development Schemes we have examined, we feel that there will be ample supply of wire rods available for drawing wire in the various regions of the country. But if the existing plants in the country are to supply wire rods to these prospective manufacturers, then they in turn should be assured of the supply of their raw material. Adequate supplies of billets at a fair selling price to the re-rollers must be made available to such of the units in the industry who have plants for drawing wire. Pig Iron must also be supplied at a fair selling price to such of them who manufacture their own steel like the National Iron & Steel Works at Belur. This is a matter which should receive the immediate attention of the Government of India, and we suggest that the interim proposals of the Major Panel must be implemented forthwith, so that the existing producers of wire and wire products get into full production at an early date.

(*b*) *Supply of cheap Power :* The places, where we have recommended the new plants to go up and the places where the existing units are situated, are adequately provided with electric power, excepting Indian Steel & Wire Products Ltd., who would find it difficult to secure all the electric power required for putting their plans into execution. When this works was started and the Tariff Board granted protection, it was on the tacit understanding that adequate supplies of billets and electric power would be made available. Since then this industry has made great progress and performed war work of considerable importance. It is a national asset and has a priority of claim for the supply of its raw material and power in order that it might exist side by side with the pioneer steel works. Similarly, the Bengal Electricity Power Board will have likewise to consider sympathetically the application for increasing the load that will be required by the National Iron & Steel Co., Ltd., and their subsidiary, the National Screw & Wire Products Ltd.

(c) *Technical Assistance :* Government assistance will be required in respect of offering technical advice and for placing at the disposal of the new plants in the various regions technically trained men to form a nucleus staff of skilled workers, who in their turn would train indigenous labour in the various processes of the industry. If plants involving patented processes are imported, it is presumed that provision will be made in any arrangement or agreement to lend the services of foreign technical staff, who would stay in this country for a period of years and train indigenous labour. In the same way, arrangements will have to be made with the existing manufacturers to take up a number of apprentices to be trained in the processes of drawing wire, annealing and galvanizing it and for manufacturing nails, so that a nucleus of skilled labour might be available to new factories when they come into operation. We also recommend that if any of the existing plants or prospective manufacturers desire to send their own employee abroad for acquiring skill and further knowledge in similar plants in other countries, Government should give all facilities for such training.

(d) *Protection :* If the prevailing high price of steel and steel products both in this country and abroad continue to remain at the present high level, and if the existing conditions are to prevail for sometime to come, then in the case of wire and wire products industry also, the need for protection may not be justified. We feel that to guard against any possibility of foreign dumping, the industry be adequately protected and that the existing protective duty should remain on the Statute Book though its enforcement may not be necessary. We also recommend that when the production of other wire products is taken up, the scope of the protective duty should also include these products when satisfactory evidence to show that the requirements of the country would be met by the indigenous products substantially, if not fully, is produced. The Tariff Board in 1934 excluded the grant of protection to the manufacture of barbed wire, wire fencing and wire netting, with a view to prevent unnecessary burden on the agricultural community. We feel that the time has now come to dispense away with this preferential treatment of the so-called agricultural community, because we feel that in that community, wire fencing is made use of only by wealthy farmers and zemindars who have large tracts of land or orchards yielding considerable income. The fact that only 5,000 tons of wire fencing was imported is indicative of the proof that the number of such agriculturists was small considering the size of the country, and the fact that 90 per cent of the people live on the land.

15. *Control of Industry :* The Government of India in declaring their industrial policy have clearly and categorically indicated that in a planned economy control of industry is an essential feature, without which the development cannot be regulated nor the national assets and income be diverted into channels which would bring about predetermined results. In our opinion, the following controls are necessary if efforts to increase the aggregate and *per capita* income are to be successful :—

(1) Control of basic materials to ensure equitable distribution.
(2) Regulation of output in accordance with demand.
(3) Control of prices.

(4) Regulation of exports and imports.

16. *Control of prices:* If benefits arising out of low prices are to be passed on to the consumer in respect of the products of the processing industries, the first essential control, we think, which should be imposed is in respect of prices, but those upon whom the onus of fixing prices will rest, will be required so to fix them that the prospective enterprises are able to sell at a price which allows due weight being given to higher cost of production which is bound to occur in the initial stages. We also recommend that the method of fixing basic prices according to the prevailing import prices at the ports should be done away with and a price structure should be introduced, based on the works costs of production, to which must be added a liberal percentage for depreciation and all usual overheads and a rate of profit which on the one hand would maintain the existing industry in a financially sound position and on the other hand would attract the amount of capital which would be required for its rapid development. It should also include all direct and indirect charges for sale and distribution which cannot be recovered from the consumer.

Railway Freight: With a view to develop these industries in the various regions, the present policy of charging freight from the nearest port to the destination should be dispensed with and freight rates should be so fixed that at no place the consumer should have to pay more than Rs. 30/- per ton, and no place should completely escape the incidence of Railway freights as has been the case of ports, before the war.

17. *Control of basic materials and output:* Next in importance is the control of the basic materials required by the industry. In our planning, we have dispensed with the necessity for the new units to set up their own rolling mills to roll wire rods. This has been done to avoid the high capital costs of such rolling mill and to make these units as economical as possible. It will be, therefore, incumbent upon the controlling organization to see that adequate steps are taken to ensure that the basic materials required by these plants should be met to the extent we have indicated and at reasonable prices. Similarly, the existing large scale producers, like the Indian Steel & Wire Products Ltd. and the National Screw & Wire Products, must also receive adequate supplies of pig iron to manufacture their own steel for billets. It will be the first duty of any controlling organization to issue for the erection of a new plant in any particular region only after satisfying that due provision has been made to secure the necessary basic materials. Equally important is the control of the output of the industry, which should be regulated to the necessities of the time. We must reiterate that this should not involve undue interference in the management and working of private enterprise.

18. *Control of exports and imports:* Exports of the products of this industry should be brought under control. It should be the first duty of the industry to supply the whole demand of this country and the high prices probably obtainable abroad should be resisted as a temptation to starve the home markets. It is primarily for this reason that export should be controlled and prohibited unless made against a licence which should only be issued if the controlling authorities are satisfied that the industry has an exportable surplus.

In the same way, imports of wire and wire products will have to be controlled. Until the new units are in full production, it may be that domestic production may not be able to cope with the internal demand, and it may be necessary to import these products in such quantities as would balance local production with consumers' demand. Failure to do so, will result in black-market. As in case of exports, imports should be against licences to the extent required to close the gap between production and demand.

19. *Control of quality:* The last control, which would be most desirable is in connection with the maintenance of the quality and high standard of output of the industry. The products of this industry have so far been manufactured strictly to British and Indian Standard Specifications. It is essential that this practice should continue, and should be made applicable to plants which may come into existence later on.

In concluding our observations on the subject of control, we must emphasize our view that the control of prices, control of the basic material, control of output, control of imports and exports should not be permanent. These controls are necessary so long as conditions of scarcity prevail. As soon as producing plants are able to meet internal demand, the control should be relaxed. We agree with the other Panel that "it can never be in the national interests to maintain control which result in making a whole industry or any part thereof the close preserve of some special interests".

20. *Sales Organization :* The Iron & Steel Major Panel have recommended the formation of a Unitary Sales Organization on the lines of the Tata-Scob arrangement, and we feel that by adopting this method of distributing the products of this industry through the proposed sales organization, the advantages accruing would be many :—

(a) It would enable the industry to market their goods through merchants whose financial resources and business ability are already known to this organization;
(b) it would reduce the cost per ton of distributing products;
(c) it would eliminate cut-throat competition;
(d) this organization would be better placed to fix a fair selling price which would have to obtain the approval of the Government;
(e) it would enable all the units to concentrate their attention on running their plants efficiently without the constant temptation to lower quality under pressure of cut-throat competition;
(f) in the export market, it would prevent the foreign buyers from playing one selling agent against another and thus creating unfair competition; and
(g) if small units are to be installed in the various regions of the country then financially it would be impossible for them to build up an efficient sales organization either in this country or abroad.

This, in our opinion, is one of the most important reasons why the existing and prospective producers of wire products should join the "selling organization" which the other Panel have recommended.

However, any manufacturer who desires to keep out of this organization and market his products independently, should be allowed to do so and no attempt should be tolerated to coerce him to join such an organization. In the same way, no attempt to coerce other manufacturers, particularly the new ones who will be working on a small scale, by any unhealthy competition with a view to eliminate them and then to exploit the market, should be tolerated.

Chapter IV—Fasteners, Nuts, Bolts, Rivets, Spikes and Screws

21. *Capacity:* The total average import of these materials was about 22,000 tons per annum before the war. If we add the local production of about 10,000 tons of Messrs. Guest Keen Williams Ltd., the only large scale pre-war producers of fasteners, and about 4,000 to 5,000 tons produced in the railway workshops, engineering firms and by other small manufacturers, then the pre-war consumption of fasteners could be placed at 34,000 to 35,000 tons per annum.

22. During the war, the average production of indigenous manufacturers was about 16,500 tons, but import for the entire period is not known. From the figures of imports given by the Steel Commissioner for 1944, it is found that during that year, 20,000 tons of fasteners were imported. These figures of imports during the war are not of much value.

23. *Target:* In fixing the target for the fasteners industry, we are faced with the same difficulty in assessing the potential demand, and we have adopted the same method as in the case of wire and wire products industry. We have estimated the back-log of demand to be satisfied during the first five years of the plan at about 85,000 to 90,000 tons. To add to this, there are vast schemes of post-war development, one of which is to establish a shipbuilding industry in this country, which is one of the largest consumers of fasteners. Considering all factors, we feel that it would be a conservative estimate to fix the target of 60,000 tons per annum for the post-war period. This, of course, will be feasible only if major schemes of development, repairs and renewals are put through. This is one of those items of hardware, which will immediately command a large export market provided it is manufactured according to British Standard Specification or the Indian Government Standard Specification.

24. The existing units, viz. Messrs. Guest Keen Williams Ltd., will increase their output from their present production of 15,000 tons to 30,000 tons, Messrs. Indian Steel & Wire Products will raise their production to 4,000 tons and Messrs. National Screw & Wire Products will raise their capacity to 2,500 tons of bolts, nuts and rivets, so that the existing plants when they complete their expansion programmes will between them produce approximately 35,000 to 36,000 tons of fasteners, leaving a quantity of 25,000 tons, for which new units will have to come into operation.

25. Messrs. Guest Keen Williams Ltd. have represented that it is not desirable to regionalize this industry, but we have examined materials submitted in support of the same carefully, and we feel that it is possible to build small factories in this country as has been in vogue in such large steel producing countries like Germany, France, Belgium, Luxemburg, where small plants manufacturing both wire and wire products and fasteners exist all over the country. In the matter of manufacturing this item of hardware, we have advised the Government of India to ascertain from abroad the capacity of an optimum economic plant for the fabrication of fasteners. In the event of the recommendations being made for the erection of two plants with the capacity of 12,000 to 15,000 tons like the pre-war plant of Messrs. Guest Keen Williams Ltd., we recommend that at least one of these plants should be installed at Ernakulam or Cochin in South India, and another one in the Punjab. In the event of small units of a capacity of 5,000 to 6,000 tons each being recommended as economic units then we recommend that one unit should be installed at Cochin, another one in Bombay, a third one in Hyderabad, and the fourth one at Lahore. Our reasons for planning on these lines have been carefully set out in paragraphs 141 to 144.

26. *State Aid.*

(a) *Supply of raw materials:* It is not so much for the supply of processing materials to the new units that Government's assistance will be required, but it is in respect of the supply of billets to the Indian Steel & Wire Products Ltd. and to Messrs. Guest Keen Williams Ltd. that Government will have to see that adequate provision is made to supply sufficient quantities of billets to these firms. It has been suggested that manufacturers in the ports should not be supplied with indigenous billets as they have an alternate source in imported billets, but considering the very uncertain position in regard to import of billets from abroad, we regret, we are unable to agree to this. We consider fasteners to be a vital requirement of our Structural Engineering Industry and for the enormous building programme which is to be introduced all over the country. Therefore, high priority will have to be given for the supply of requisite billets to the producers of limit bars in the country.

(b) *Cheap Power :* In regard to supply of cheap power, we have nothing to add here because the places we have recommended for the location of the required units are in the main happily situated as far as cheap power is concerned. We, however, would like to draw the attention of the authorities concerned to what we have stated about the Indian Steel & Wire Products Ltd. (Refer paragraph 14(b).

(c) *Technical Assistance :* What we have stated above in the case of wire and wire products industry also applies in the case of fasteners industry.

27. *Tariff Protection :* The industry is a protected one, and we feel that the duties hitherto enforced should continue to remain in operation. We fear that in the immediate or in the near future, a large quantity of second-hand nuts, bolts, washers, etc. might be imported in this country at cheap rates as very large surpluses are available from various theatres of war. As the import of such nuts, bolts and washers might affect the local production, Government might be called upon to take legislative measures either to increase the import duty or to prohibit the import of such materials on the submission of sufficient evidence by the industry itself. We consider the development of this industry very essential as an integral part of the industrial planning.

28. *Railway Freight :* As one of the important reasons for their shutting down their factory in Bombay and transferring machines to Calcutta, Messrs. Guest Keen Williams Ltd. submitted that the high freight of Rs. 53 per ton chargeable on carriage of limit bars from Calcutta to their factory in Bombay was responsible. We consider that railway or steamer freight for despatch of materials from manufacturers of limit bars in any part of the country should not be higher than the steamer freight chargeable from any port in a foreign country from where limit bars or fasteners manufactured therefrom could be imported into the Indian Union. Shipping freights have been so fixed by some of the maritime powers that they give virtually indirect protection to some of the industries, which otherwise could not export their products. We have quoted the example of sea freight of Rs. 14-6-0 per ton chargeable on the import of bars from the United Kingdom to any major port in this country as against Rs. 53 for carrying bars from Calcutta to Bombay. For a country like India, which has at present little shipping of her own to carry her products abroad and thus create markets for her industries, it is necessary to protect our industries at home, so that their development may not be thwarted by indirect encouragement given by foreign countries to the export of their products.

29. *Export and Import Restriction:* In the case of this industry also, we feel, that same measures may be adopted to safeguard the interests of the industry and the consumers, as suggested in case of the wire and wire products industry.

30. *Control of Industry :* We feel that the prices of fasteners are high and that at the earliest opportunity, a proper enquiry by the Tariff Board or any such Government Body should be instituted to ascertain the reasons for the high prices prevailing to-day.

In regard to the incidence of freight in relation to the build-up of price quoted to the consumers, our recommendations are the same as in the case of wire and wire products industry.

In regard to the control of output of the industry, export and import of its products, their manufacture up to British Standard Specification and their marketing, our recommendations are the same as in the case of wire and wire products industry.

Chapter V—Building and Domestic Hardware, Cutleryware and Allied products

31. Building hardware is manufactured all over the country on small and cottage industry scale. Before the war, Japanese competition was keen, but despite this, the industry made some headway, particularly in the upcountry towns and villages, where hinges, door-bolts, latches and other window fittings, locks and padlocks have been produced in large quantities. Development of this industry received impetus during the war as a result of the increased demand by the Supply Department and by the virtual cessation of imports. Manufacture of these products in large scale factories has also been undertaken by two or three firms in Bombay and Calcutta, of which the most noteworthy is the Acme Manufacturing Co., Ltd., of Bombay.

32. It is anticipated that the demand for building hardware will be on a considerably large scale in the post-war period than hitherto owing to the enormous building programme, which has been prepared by the various Provincial and the Central Government Departments. In the Punjab alone, according to the Report of the Provincial Town Planning Officer, it will be necessary to spend about Rs. 300 crores to meet the housing needs of the people and it will be necessary to build about 33,500 houses per annum throughout the province for 20 years and an additional 33,500 houses for five to seven years to make good the deficiency arising out of more or less complete cessation of civilian building activities during the war. (*Note* :—This estimate was made before the Partition).

We, therefore, feel that the development of this industry should receive the careful attention of all Provincial and States authorities and their Directors of Industries.

33. The Domestic Hardware and Cutlery Industry have been known to exist in this country as cottage industries from times immemorial. Since the formation of the Departments of Industries in various provinces, attempts have been made to establish these industries in small scale factories. The development of these industries in the U.P. was a noteworthy feature, particularly of locks and padlocks at Aligarh and cutleryware at Moradabad. Before the war, Moradabad cutlery was produced and marketed at lower prices than the imported Japanese products. Most of the knives were made from low grade carbon steel and the use of stainless steel was not developed because the material was not indigenously produced, nor the technique of working on it was known. Inspite of these difficulties, some headway was made before the war in the production of stainless steel cutlery by Messrs. The Metal Industries of Lahore, who at the time of writing this Report had a well equipped and suitable plant. (*Note* :—It is not known what happened to it since the Partition). Due to the partition of Punjab and the disturbances that followed, Messrs. Metal Industry of Lahore, were compelled to evacuate from that place and were only successful in bringing out a part of the machinery. They are, however, making efforts to acquire the missing equipment and hope to put up their factory in Lucknow.

34. *Current output :* It is difficult to assess the current output and value of building and domestic hardware that is being manufactured in this country, because production is carried out in large, small and cottage scale plants and the statistical data is almost nil. We have reason to believe that bulk of the materials consumed in this country are now manufactured locally.

Because this is so, it does not necessarily follow that expansion in its production in the post-war period is not necessary. During the post-war period, we have not only to meet a substantial portion of the demand which has been denied during the last six years but also the requirements for the construction of factories for new industries and for the building trade. There is also a very large market for export in regions east of Suez, where Japanese hardware of this nature had a big market before the war.

35. *Target of Production :* There being no statistical data available to ascertain the indigenous production, we suggest that small units for the manufacture of building hardware should be located in all provinces and major States. For this purpose, we suggest that the Directors of Industries and all the officers entrusted with the task of sponsoring development schemes of various provinces should form a committee of architects, engineers, officers of the P.W.D., representatives of the Chambers of Commerce and a few well-known building contractors. This committee should examine the schemes of provincial governments, district and local bodies, municipalities, etc., and if possible also ascertain from private individuals by notification in the press particulars of any building construction that they have in view. Having done so, they should prepare an estimate of the types of fittings required, make an attempt to standardize the requirements and work out specifications, so that standardized products of sufficient strength and proper quality could be manufactured within the province, for its own needs.

36. In regard to the superior quality of building hardware required for up to date and modern buildings, we suggest that two more factories of the type which Messrs. Acme Manufacturing Co., Ltd. have established in Bombay should be erected, one in Bengal and the other in the Punjab. The location of the plants in the respective provinces is left to the local governments and the *entrepreneurs* concerned, as these are comparatively small units and can be erected anywhere in the provinces concerned. We do not think at this juncture there is any necessity for a plant being erected in South India. In case any firm desires to set up a plant for the manufacture of hardware for the export market, its construction should be encouraged in a major port preferably Bombay, from where shipments could be conveniently and economically despatched to all the countries east of Suez.

37. What we have stated above also applies to the manufacture of superior quality cutleryware. Our suggestions may not perhaps meet with the approval of the people interested in the industrial development of other provinces, but the reason which has prompted us to make our recommendation is that these provinces to-day are industrially most advanced and contain the largest population of the class, who are the usual buyers of cutleryware and domestic hardware of a superior quality. In no other province will the number of such persons be adequately large enough to warrant the construction of such plants in the immediate or the near future.

38. *State Aid :* As the development of these industries is to be carried out under the aegis of the Departments of Industries in the various provinces and States, the provincial governments will have to take upon themselves the responsibility of purchasing in bulk the basic steel from primary producers and distribute it amongst the various manufacturers. Our object in making this proposal is to protect the cottage industry from being exploited by the middlemen who, taking advantage of the indebtedness of the small-scale manufacturers, compel them to buy the raw materials at considerably higher prices and take away their finished products at prices which would leave them bare means of subsistence and keep them perpetually under the bondage of the middlemen. For the same reason, we would impress upon the provincial governments the

necessity to form a marketing organization of the industry, or an association of small-scale manufacturers, to give them the benefits of co-operative marketing. We also suggest that the heads of the departments of industries in the various provinces and States should meet and discuss the development of these industries on certain well-defined lines, so that they may be developed on an all-India basis. Other recommendations on the same subject have been made in dealing with the Surgical Instruments and Allied Products Development Centre in Chapter VIII of this Report.

39. *Supply of Power:* We have no recommendations to make.

40. *Technical Assistance:* We recommend that the Department of Industries should engage the services of technically qualified supervisors with practical knowledge of the machinery and equipment used in various factories for the purpose to advise and assist the manufacturers for the upkeep and maintenance of their plants and to demonstrate to them efficient and correct methods of handling the machine.

As the small scale industrialist would always be handicapped for want of up to date and expensive machine tools, we recommend that a Central Workshop be created and located in such a part of the country from where it would be in a position to supply dies and machinery parts of standard quality to the small scale manufacturer. The development of such a Workshop coupled with skilled supervision of the manufacturing processes by technically qualified men would immediately raise the standard and quality of the output of this industry, which is so very essential to put it on a sound footing and for developing the export market.

41. *Control of Industry:* In our opinion, the control of industry in the form it is applied to-day is not necessary for the future development of the building and domestic hardware industries. What is necessary is technical guidance, supply of raw materials of quality and at reasonable prices and standardized equipment and machinery parts for the small units of production which may be set up in the various provinces. Price control of any nature is not necessary. The goods being manufactured on cottage scale will cater for markets in areas within small distances. The only check necessary to prevent any deterioration in quality is to see that raw materials of proper quality are used and the factories are equipped with standardized machines. To do this, frequent inspection from the technical staff of the Directors of Industries will be necessary, but this should be in the form of an aid to the industry and not as control.

42. *Marketing:* We are also of the opinion that no centralized marketing organization for these industries is necessary. In regard to the export markets, the reports of our Trade Commissioners in the adjacent countries indicate that the export of domestic hardware and cutleryware would be very welcome. This should, however, be attempted only after indigenous demand is satisfied. It will be necessary for the Departments of Industries in the various provinces to consider methods of marketing when such exportable surpluses are achieved. It will then have to be decided whether the products are to be marketed through the large merchant houses in the ports who will take good care to see that products of good quality properly and attractively packed are despatched abroad, or alternatively marketing by a central organization formed under the guidance of the Departments of Industries of the various provinces may have to be considered.

Chapter VI—Hollow-ware and Enamelware.

43. Metal pressing, processing and welding industry in India is of comparatively recent origin. Manufacture of containers for petrol, lubricants and other oils

was taken up by the large-scale importers of these products, like Messrs. Burmah-Shell Oil Storage & Distributing Co., the Attock Oil Company, the Standard Vacuum Oil Co., etc. The containers for food products have mainly been manufactured by the Metal Box Co. of India Ltd. At the outbreak of the war, this firm employed approximately 900 workers in their two factories at Bombay and Calcutta, which number increased to 4,000 in 1943. The quality and output of the firm are comparable to that manufactured in any foreign country and the contribution of the company to the economy of the country can well be measured by the fact that consumer goods to the value of approximately Rs. 15 crores are packed in containers produced by the company for more than 300 industries employing over 50,000 workers. During the war, some small manufacturers of hollow-ware and tin containers also came into existence. In addition to these manufacturers, a number of packers do manufacture their own containers. This was necessitated by the fact that there was no establisled containers manufacturing industry till Messrs. The Metal Box Co. of India Ltd. came on the scene.

44. *Target for Post-war Production :* In regard to the manufacture of containers for the storage of mineral oils, the principal use for which these containers are required is for packing kerosene oil which has a market in every village in India. With the introduction of the hydro-electric schemes all over the country and with the availability of electric power as a cheaper substitute for domestic lighting, etc., it is anticipated that the consumption of kerosene oil in the country may decrease. In case this does not happen and the use of mineral oils increases, then the oil storage and distributing companies, which are the principal manufacturers of containers for this purpose, will themselves look after the expansion to their plants. We do not think that any national planning is required for this purpose as long as the containers are manufactured in the country from materials locally manufactured with the help of indigenous labour and technical staff.

45. In regard to the containers for other purposes, we have been guided in assessing the target of production by the information made available to us by the Metal Box Co. of India Ltd. That target is based not on the different types of cans that will be produced, but on the overall tinplate consumption. It is estimated that the immediate requirements of tinplates would be 90,000 tons per annum, of which 40,000 tons would be required for kerosene oil, 20,000 tons for the factories of the Metal Box Co., 2,500 tons for tea chest lining and case bindings and 27,500 tons for other manufacturers. This demand for tinplate is expected to go up to 110,000 tons in 1950, 130,000 tons in 1955 and 150,000 tons in 1960. These are the estimated requirements, but owing to the shortage of tin bars, these will have to be scaled down to the Tinplate Company's consumption of 70,000 tons per annum. It may be noted that the above figures have not taken into account the containers that will be required to pack about 125,000 tons of vanaspati per annum, production of which has been planned during the first five years of the plan. Our reasons are that it is by no means certain exactly when all these factories will come into production, nor is it known as to whether the products will be packed in four gallon tins or in smaller ones.

46. *Location of new Plants* : We do not consider it advisable to make any recommendations in this respect, because we find that there has been a fair geographical spread at present and that the container manufacturers are likely to consider expansion wherever the demand for containers arises. Messrs. The Metal Box Co. of India Ltd. propose to open a new plant in Madras of the type they have in Bombay and Calcutta, and we feel that they would be in a position adequately to meet the requirements of South Indian packers.

47. *State Aid* : We have indicated above that India's present requirements of tinplate are at least 90,000 tons, and they have been estimated to rise to 150,000 tons within 15 years, whereas the maximum output of the Tinplate Company is 70,000 tons per annum. At present, owing to world shortage of tinplate, it is impossible to import supplies from abroad and, therefore, on a short term basis, India will not be able, through shortage of raw material, to manufacture her full requirements of containers. We understand from the Tinplate Company of India that they would be prepared to consider expansion of their present rolling facilities provided :—

(a) sufficient tin bars are supplied to them ; and
(b) adequate financial arrangement are made by the Government for the capital cost of the plant.

It will be for the Government to decide whether the capacity of the existing Hot Pack Mills with this firm should be augmented rather than to wait for seven years before a continuous strip mill as suggested by the other Panel comes into existence. If they consider it necessary that the output should be increased immediately, then from the point of view of amortizing the additional plant required with the least possible cost to the consumer over the period, the sooner the project is proceeded with, the better.

48. The other aid which the industry had sought from the State is in connection with the fixation of railway freights. At the moment, freight on containers is paid three times, first when the tinplate is supplied to the manufacturer, secondly when the manufacturer despatches empty containers to the packers and thirdly when the packed goods are despatched to the consuming markets. We have examined carefully the matter and support the claim made by the industry for revising the railway rates in a manner as would make their incidence as low as possible. This will not only give the necessary relief to the industry, but will augment considerably the distribution of foodstuffs and agricultural products to the various consuming markets in the country as the supply of food has the highest priority in the movement of traffic on the railways. Immediate action in this direction is essential. Large scale movements of tin products from the agricultural to the industrial provinces or from the hinterland to the ports is bound to result in a considerable increase in the volume of traffic which would more than compensate the relief sought by the industry.

49. *Control of Industry :* In regard to the control of prices, the industry is so placed in its relation to its customers that its own development rests entirely on the cheap prices at which the cans of various descriptions can be supplied to the packers. Again, it is always possible for the larger consumers to start their own containers making plants in the event of their not receiving their supplies at cheaper prices from the container manufacturers. Other forms of control are also not necessary, except in that the container manufacturers should be associated when the proposed Indian Standards Institution is formed as in other countries, to ensure the greatest possible degree of standardization in size. Standardization of containers would eliminate certain types which are wasteful in material and productive capacity.

50. *Marketing Organization :* The manufacturers should be allowed to handle their products independently and distribute them as they have hitherto done, as it is economical.

51. *Export :* There is clearly no possibility for the export of empty containers as any country which requires containers to a volume, which would make export attractive, would clearly establish its own container manufacturing industry. The real prospects for export are of the finished products packed in

attractive, reliable and inexpensive containers, but consideration of this is beyond the scope of this Panel.

52. *Enamelware:* This industry was started in this country during the quinquennium following the first world war. The Tariff Board concluded that the prospects of the enamelware industry were not unfavourable if initial difficulties could be removed. But, they stated that nothing would be gained by imposing a high duty, as the market was not a large one then. The outcome was that the enamelware industry did not progress in this country, as it should have, until the conditions during the war brought about a complete change. To-day, the number of firms manufacturing enamelware has increased to over a dozen, and the total annual production has reached 72,00,000 pieces of principal items.

53. *Target:* We are not in a position to indicate precisely the target to be achieved during the first five years of the Plan. In our opinion, the production which the industry has attained throughout the period of the war is considerable. One of the principal manufacturers, Messrs. Sur. Enamel & Stamping Works Ltd., Calcutta, have increased their capacity to consume five times more steel and non-ferrous metals in 1944 as compared to their consumption in 1937. This firm have indicated that before making extensions to their plants, they would like to see how the capacity augmented during the war is going to be absorbed.

54. Messrs. Kamani Brothers Ltd. have made definite plans for setting up of a new plant with capacity for producing 36,00,000 units per annum. They believe that the production of their new plant would be easily absorbed in the country and they would be in a position to export any surplus after meeting the country's demand. We are of the opinion that the consumption of enamelware could be increased considerably within the country itself, if the products of the industry, which are mainly domestic utensils commonly used by poorer classes, are made sufficiently cheap. At the moment, there is no information available to indicate the nature of competition which the enamelware industry is likely to face from the manufacture of stainless steel hollow-ware. Therefore, we are not in a position to indicate precisely the number of factories to be located in various parts of the country together with their capacity. We do know that if enamelware of good quality is produced in this country at reasonable prices and offered for sale as a durable substitute for earthenware, then there is every possibility of the augmented capacity being fully utilized and it might be even necessary to set up further factories to meet the indigenous and foreign demand, depending on whether the price would be sufficiently low for Indian goods to take the place of the Japanese.

55. There is no evidence at the moment to show that enamelware manufactured in a large scale plant would bring about a considerable reduction in the production cost and consequently in the sale price, because there is no information available in the country to-day. We, therefore, recommend that Messrs. Kamani Brothers Ltd. should be allowed to put into operation a plant with the capacity of 300,000 units per mensem. Only when this is done, it will be possible for anyone to indicate the price at which the products of such a plant could be marketed. It may be that manufacture of enamelware in such large scale units would work out considerably cheaper as has been seen in the case of metal containers manufactured by the Metal Box Co. of India Ltd. If the results justify our belief, then it may be possible to establish a large scale plant on the east coast, preferably at Vizagapatam, so that not only the markets in the adjacent provinces may be catered for, but the goods may be exported to Burma and Malaya. If private enterprise in South India is prepared to set up a plant, we suggest that it should come into operation two years after Messrs.

Kamani Brothers Ltd.'s plant has commenced fabrication. During this period, we feel it would be possible to have an approximate idea of the capacity of the country to absorb more enamelware goods and the ability of the industry to produce them cheaply.

56. We do not think the construction of large scale factories in Northern or Central India, C.P., Bihar and Orissa would be justified during the first five-year phase of the plan. This does not preclude small scale factories being installed to meet such local demand as may exist, but care must be taken to see that such plants are in a position to manufacture and market products of good quality at reasonable prices. We regret it is not possible for us to make any definite recommendations as the products of this industry are consumer goods depending upon the tastes and prejudices of the consuming public, and we know that in certain parts of the country, public show less inclination to utilize enamelled utensils.

57. *State aid for Plant expansion:* The manufacturers of enamelware indicated both in their replies to the questionnaire issued by us and in their oral evidence that they would prefer to purchase imported sheets rather than those manufactured indigenously, because it was difficult to enamel local sheets to produce the high finish obtainable on imported sheets. Our opinion is that the local fabricators have not enough technical knowledge regarding the proper treatment of the basic material, and we feel that the primary producers who are interested in the consumption of their products should accord every facility even at some financial scarifice to see that this industry is established on sound lines.

58. With regard to the free import of chemicals and other raw materials, we regret, we are not in a position to offer any comments as this matter is for representation and consideration by the Tariff Board.

59. In regard to technical assistance to the industry, we suggest that at the proposed National Metallurgical Laboratory at Jamshedpur, a section or sub-section may be opened where experiments may be carried out so that suitable quality sheets may be manufactured for the Enamelware Industry. The same complaint has been received from the manufacturers of Steel Furniture and Fittings.

60. *Control of Industry:* We do not think control is justified under existing conditions. If the industry is not protected and imports are not restricted, price will be governed by the law of supply and demand. Hence, no control of price is necessary. Bureau of Standardization and Testing Laboratories for the products of this industry is likewise not essential, though it is desirable if the products of this industry are to find markets abroad. If the industry so desire, their products may be tested at the National Metallurgical Laboratory.

61. *Marketing Organization:* The various units in the industry may be allowed to market their own products as they have done hitherto. This will induce healthy competition between them to the benefit of the consumer, and we see no reason to interfere with trade channels through which these goods have been marketed all over the country for the last two decades.

Chapter VII—Surgical instruments and appliances

62. The phenomenal development of this industry during the war is an outstanding example of the good results which can be achieved by planned development when materials and equipments are adequate and when they are operated under proper technical guidance. It is no small achievement that 73 per cent of India's needs of surgical instruments and appliances, 98 per cent of orthopædic instruments and appliances and 100 per cent of Ward and

Operation Theatre equipment requiring high craftsmanship, superior materials and vigilance in supervision have been manufactured in this country in the brief space of five years and in circumstances which were far from normal. Manufacture of surgical instruments, including scissors and appliances, is concentrated in the Lahore and Sialkot Districts of the Punjab (75 per cent) and the rest (25 per cent) in other places, particularly in Bombay.

63. *Current capacity:* Messrs. Powells Ltd. had originally a factory situated in Bombay, which has now been transferred to the Baroda State. Its capacity is approximately 25,000 units per annum comprising delicate instruments of a complex nature. Messrs. E. Eyres & Co. have a plant with a capacity of about 15,000 to 20,000 units per annum. The Bombay Surgical Co. has a plant manufacturing about 10,000 units per annum. Therefore, the total capacity in Bombay is about 55,000 pieces per annum. To this may be added the small production in Calcutta, Lahore and other places of about 5,000 instruments. With approximately, 125,000 instruments from Sialkot, our annual production is approximately 250,000 instruments. We are informed by the trade that India's total requirements of surgical instruments to-day is not more than 125,000 units.

64. *Target:* To enable us to estimate a target of production, we sought the advice of Dr. S. P. Nair of Powells Ltd., who was sent abroad by the Government of India. We sought his advice particularly to measure the requirements of surgical instruments in light of the Report of the Bhore Committee on the Fifteen Year Public Health Plan. Taking into account the number of instruments required in a medium size hospital of one hundred beds, Dr. Nair estimated that for the number of such hospitals envisaged by the Committee, a total of 900,000 instruments would be needed over the first five years of the Fifteen Year Plan. This would absorb the bulk of the existing capacity in the country provided the Bhore Committee's Plan is implemented. Besides, there are numerous hospitals, nursing homes, dispensaries, where a large number of surgical instruments are also required.

65. Dr. Nair on behalf of Messrs. Powell Ltd. stated that the company planned to extend their factory to produce 500,000 instruments per annum, including cutleryware, such as knives, scissors, etc. Similarly, the Mysore Government expressed their intention to manufacture high grade surgical instruments in South India, in order to provide an outlet, for stainless steel in the manufacture of which the Mysore Iron & Steel Works were experimenting. Their plans to indicate the number of instruments they intended to manufacture were not developed at the time of writing this Report. We have no objection to expansion of the Powell's factory, nor to the establishment of a new one in South India. But, we must draw their attention to the fact that the capacity of 250,000 units is already adequate to look after the entire demand under the Bhore Plan without the creation of new units. Moreover, this plan would come into operation by stages and, therefore, we would have considerable surplus capacity available for absorption in this country and for marketing abroad during the interim period. We would, therefore, sound a note of warning to all prospective *entrepreneurs* to proceed with their plans cautiously.

66. We have shown that about 75 per cent of surgical instruments are produced by the cottage scale manufacturers in the Punjab. In our opinion, it is undesirable that these cottage scale manufacturers should be eliminated. Any attempt to expand large scale production units should not be at their expense. If Messrs. Powells Ltd. establish a plant of the type they contemplate, then a line will have to be drawn somewhere, demarcating the spheres of distribution, so that they and their small and cottage scale competitors in the Punjab may be able to market their production. Because the small producers

marketed 75 per cent of the total production of the country during the war, they cannot, as a matter of right, claim an equivalent portion of the civilian market during the post-war period. The increase in their output was due to the complete cessation of the imports from abroad, but they have produced instruments of quality and type, which will not be acceptable to the surgeons during the post-war period. Therefore, if the small scale industry in the Punjab has to be put on a sound and economic basis, such units or manufacture of such instruments which could not be carried out with as much precision and accuracy as could be done in modern bulk producing plants, should be eliminated. We feel that this problem is bound to arise within the first five years of the Plan and, therefore, we draw the attention of those who are closely associated with this industry to this matter, so that both the large scale and cottage scale producers have a place in the country's economy.

67. *State Aid to Industry :—*

(a) *Raw materials :* Considerable difficulty was experienced when indigenous stainless steel was first used in the manufacture of surgical instruments. But, Messrs. The Tata Iron & Steel Co., Ltd. deputed a technical expert and ultimately gave to the Department of Industries, Punjab, equipment which he took with him there for advising the fabricators in the correct method of processing indigenous stainless steel. We also understand that primary producers mainly responsible for the supply of this class of steel are making arrangements with British Manufacturers of stainless steel to utilize their patents. We, therefore, hope that shortly indigenous stainless steel of suitable quality will be available to surgical instruments and cutlery manufacturers. However, if they fail to do so, then to help the industry, the small quantity of stainless steel may be allowed to be imported at the ordinary tariff duty. On a matter of principle, such a course would be contrary to the dictums of sound planning, but as very small quantities of certain sections are required for the purpose, the objection might be overruled.

(b) *Cheap Power :* Large scale plants which are already existing have got adequate supply of electric power and if a new one was to be started in the Mysore State, hydro-electric power is plentiful there.

(c) *Technical Assistance :* The Surgical Instruments Centre at Sialkot should aim at the following :—

(i) to train local craftsmen in the various process of instruments manufacture ;
(ii) to advise in the preparation of jigs, fixtures, cutters and gauges ;
(iii) to carry out demonstrations at the centre and private factories ;
(iv) to test all instruments and allied products ;
(v) to effect standardization of the products ;
(vi) to assist the factories in obtaining adequate supplies of raw materials ;
(vii) to establish contact with indigenous and foreign purchasing agencies ;
(viii) to assist the small industries to secure orders ;
(ix) to popularize indigenous industry by propaganda ;
(x) to keep in touch with modern trends and developments in the industry in other parts of the world ; and
(xi) to set up a pilot plant to carry out research in production methods.

(d) *Control of Imports :* The capacity of this industry has so rapidly increased during the war that we suggest that no instruments of the type now manufactured in the country should be allowed to be imported.

(e) *Control of Industry :* We do not consider it necessary to advise the Government to control the industry in the matter of prices, as the industry is in a position to meet the indigenous demand at a fair selling price.

(f) *Establishment of Technical Laboratory and Standardization of Products :* We hope the Punjab Government will provide the Surgical Instruments and Allied Products Development Centre with enough equipment to carry out technical research. Similarly, the National Metallurgical Laboratory to be established in Jamshedpur may be required to establish a section of the Laboratory for research and development of stainless and special steel.

The necessity for standardization of specifications for this industry is paramount. A suitable Committee might be connected permanently either with the National Metallurgical Laboratory, or with the Development Centre, and the Committee should consist of two technically qualified representatives of the Director-General, Indian Medical Service, two eminent surgeons, one metallurgical expert, one representative of manufacturers and one from the trade.

68. The large scale manufacturers may be allowed to exercise freedom of marketing their products. It is only when the products of the small scale industries are involved that the question of marketing needs careful thought, particularly for the export trade. We are glad that the Government of the Punjab and the Director of Industries are fully alive to the fact and are arranging through the Development Centre to introduce co-operative marketing. We have no desire to describe in detail the method which should be employed, as we feel that both the Provincial Government and the Association of Surgical Instruments Manufacturers are capable of working out a scheme to meet their own requirements.

Chapter VIII—Steel furniture and fittings

69. This industry had its origin in India nearly half a century ago when the renowned firm of Messrs. Godrej & Boyce was started. With the popularity which steel furniture and fittings acquired, other companies came into being and were started in the first instance by the former employees of Messrs. Godrej & Boyce just in the same way as some of the rolling mills established in the country, were started by former employees of Tata Iron & Steel Co., Ltd. Among the other manufacturers of repute are Messrs. Alwyn Steel Works of Hyderabad (formerly of Bombay) and Messrs. Steel Products Ltd., and the Bungo Steel Furniture Co. of Calcutta. In the Punjab, the home of small scale industry and enterprise, manufacture of steel furniture has been carried on in small factories in the district of Gujranwala for over 20 years.

70. It is not possible to state a target of production according to the units of furniture and fittings produced because being consumer goods, demand depends largely on the price and tastes of the consuming public. We therefore feel that we cannot do better than accept the industry's own expansion plans based as they are on intimate knowledge of public demand obtained from their widespread organization.

71. Messrs. Godrej & Boyce are setting up a new plant in the suburbs of Bombay and are erecting buildings of modern design for housing the same. In addition they propose to set up Assembly Plants at Madras and Delhi to meet the demands of the markets in South and North India. They further propose to set up a complete new plant in Bengal to meet the requirements of the markets in Eastern India, Burma and Malaya. Their total capital investment when these projects are completed would exceed a crore of rupees.

72. Messrs. Alwyn Steel Works plan to double the capacity of their plant. Messrs. The Noble Steel Products of Bombay plan to manufacture sanitary fittings and hardware of stainless steel in addition to expanding their capacity for domestic and hospital furniture and fittings.

73. Our own recommendations to the Government of India are that these plans should be allowed to develop to their optimum capacity, in order that units may be set up in various parts of the country under management, which has already half a century's experience behind it. Because, the existing manufacturers are to be allowed to raise their production to the maximum capacity, it does not necessarily follow that the manufacture of steel furniture and fittings should be confined to them. Because we are unable to express in precise terms the demand for these consumer goods, we have no desire to keep out the new manufacturers in preference to those who are already established in this country. But the scope of its development depends on the ability to move the basic steel from the primary producers to the fabricators plant and on the proximity of markets. These conditions should be satisfied before any further new production units are established.

74. *State Aid*: The industry has submitted to the Panel that they should be permitted certain facilities in respect of raw materials required in their manufacturing processes. Firstly, they desire facilities for unrestricted import of special paints and enamels, some steel products, gun-metal, nickel-silver ingots and phosphor bronze wires because these items are not produced in India. They therefore urge that the Government should give them immediate facilities to import such of the industrial raw materials described above and particularly cold-rolled mild steel sheets, synthetic glossy paints and specialized machine tools.

75. We are in full agreement with the representation made by the industry. They have specifically stated that whereas foreign manufacturers are able to obtain their requirements of gun-metal and nickel-silver ingots at Rs. 42 and Rs. 54 per cwt. respectively, the price of same metals available from the importing houses is Rs. 80 and Rs. 160 per cwt. respectively.

76. However, the representation of the industry in regard to the supply of sheets and plates which are manufactured in the country requires careful consideration. They have submitted that in view of the difficulty experienced in working with locally made sheets and plates and the extra expenditure involved, they should be allowed to import these sheets from abroad. A written statement from the industry on the subject has been submitted. On the other hand we are informed by the primary producers that if additional treatment is required on the sheets supplied to the manufacturers of furniture and fittings, it is simply because the fabricators are using ordinary mild steel sheets manufactured for bazar consumption. These sheets are not meant for manufacture of high-grade furniture. In our opinion the question revolves round the price at which the primary producers can supply these specially processed sheets and this is a matter for an enquiry by the Tariff Board.

77. The industry has not submitted any representation for assistance from the State for the supply of electric power, technical advice, tariff protection, railway freights and restriction of imports. We do not think any recommendations from us on these matters are necessary.

Chapter IX—Hand Tools

78. Manufacture of simpler types of hand tools used for agricultural and building purposes was known to the blacksmiths throughout the country and such tools have been manufactured for centuries. When the first Tariff Board considered the grant of protection to the steel industry in 1933, two applications for protection from manufacturers of agricultural implements including ploughs and hand tools such as kodalis, powrahs and hoes were received from Messrs. Kirloskar Brothers Ltd., and from the Agricultural Implements Ltd. The Board refused to accord protection to the manufacture of ploughs and in regard to

the agricultural implements the *ad valorem* duty of 15 per cent was raised to 25 per cent; for other items, instead of 35 per cent as demanded by the industry. The Board complained about their not being able to obtain trustworthy statistics of consumption of these hand tools. Though 20 years have elapsed since then, we are faced with the same difficulty in not being able to obtain any reliable information regarding the consumption of these hand tools in the country.

79. The "Agrico" however inform us that before the war local manufacture of picks and hoes and hammers was 90 per cent and 60 per cent respectively of the total demand in the country. The extent to which production has increased in this factory which is to-day the largest manufacturers of hand tools can be measured by the increase in the labour strength employed during the war which was 960 as against 280 in 1938-39. Messrs. Kirloskar Brothers and Messrs. Metal Industries of South India also expanded their capacity. New factories came out during the war under the aegis of the Supply Department, one of which Messrs. Kamani Engineering Corporation of Lahore which manufactured hammers of all sizes, augers, vices, jacks, etc. The Mysore Implements Factory at Hassan also manufactured these hand tools but the plant was a very old one and 90 per cent of the work had to be done by hand.

80. *Post-war Target:* Unfortunately we have no data on hand to calculate the number of hand tools that would be required to carry out various development projects and therefore we cannot say what productive capacity would be required to make India self-sufficient. The problem however is somewhat simplified by one fact namely that machinery required for the manufacture of these hand tools is of a simple nature and such as can be installed quickly to produce about half a million units per annum. Again manufacture of hand tools can be taken up as a departmental activity of a major plant manufacturing agricultural and gardening implements.

81. Therefore in the absence of any tangible data, the manufacture of hand tools must be developed by stages. In the first stage the existing factories must be permitted to put into operation their schemes of expansion to enable them to achieve maximum economy in production and bring their goods within the reach of artisans and others who need them. Secondly, the production should be taken up in those provinces where indigenous implements have to be supplemented with the imported ones to meet major demand.

82. In the event of India's requirements of hand tools exceeding the productive capacity of the existing plants, we suggest that production should be taken up in small scale factories of the type which the Mysore Government have established at Hassan and which they want to expand during the post-war period. Such plants in the first instance should be installed in the agricultural provinces as it would be necessary to bring under the same roof the manufacture of agricultural implements, and carpentry and workshop tools. The desire to set up such factories would appeal immediately to other Provincial and State Governments as the type of industry which will help the well-being of the majority of the people but the success of providing suitable tools will depend largely upon the price at which they could be marketed. It would be therefore essential for the various Provinces and States to examine the feasibility of manufacturing artisan tools at a price which will enable them to hold their own against tools manufactured in mass production factories. In our opinion it is desirable and essential that in an agricultural country like India, factories should exist in various parts of the country to manufacture agricultural tools and implements for the masses, but desirable and essential though this may be, it would be contrary to national well-being if such a laudable purpose should be defeated by forcing the tiller of the soil and the artisan to purchase his tools at prices higher than would be payable if produced on mass production scale.

Therefore the setting up of such factories should be undertaken only when it is established that the tools produced in such factories would be sold at competitive prices.

83. *Government Assistance :* The manufacturers of hand tools in Northern India have indicated to us that they should get the raw materials at the same price at which the primary producers were supplying to their subsidiary and that, if the industry on the whole is to thrive, then all the units comprising it should have their basic steel at the same price. On investigating into the matter, we found that there was no truth in the complaint. But all the same on a matter of principle we submit that all manufacturers of hand tools should be able to obtain their requirements of basic steel at uniform prices.

84. *Technical Assistance :* Messrs. Tata Iron & Steel Co. Ltd., submitted on behalf of even a well established industry as the " Agrico " that unlike labour in other industries, labour in Edge Tool Industry has to be trained with great pains and when a man is fully trained, he almost becomes indispensable to the factory. The output of tools in " Agrico " is therefore dependent upon the presence of trained men and even if a few such men are absent, it makes a good deal of difference in the production of tools. Such being the experience of the largest producers of hand tools in the country, we feel it necessary that provision should be made by the Government to get a certain number of apprentices trained every year at the " Agrico " in order that other tools manufacturers can so maintain the quality of their production to compete with the best Indian made products and imports as well.

85. *Protection to the Industry :* Under the prevailing economic conditions the need for tariff protection to this industry has not been claimed by any of the existing units. We do not think that the question of protection would arise for a long time to come but even if our expectations are falsified, the Tariff Board is always there to assist the industry.

86. *Control of Industry :—*

(1) *Price :* What has been stated in the case of other industries may be reiterated here, viz. that if basic steel is provided at low prices commensurate with the cost of production and not with imported price of foreign steel, then the benefits should be passed on to the consumers of the finished products of this industry as well.

87. (2) *Control of basic materials :* Control of basic materials for equitable distribution among the various manufacturers is not necessary under normal conditions because the quantity involved is small as compared to the total output of the bar mill products of the primary producers. If the " Agrico " and other manufacturers are not receiving their full requirements of basic steel to-day, it is because of the universal shortage of steel, coal and transport which is being felt by all the industries. There is therefore no particular advice to be tendered on this subject.

88. (3) *Exports :* Control of exports of products of this industry is desirable and justified until such time as the total internal demand is fully met. This control is essential more than in any other industry, simply because hand tools are essential to the mass of the country's population and it is imperative that the supply of powrahs, kodalis, hammers, crow-bars, etc. should be available to them at all times. Embargo on the export of tools should only be lifted when the capacity of the industry has increased beyond the country's needs.

89. (4) *Imports :* A suggestion was made to prohibit imports. One of the firms stated that in spite of the fact that they are able to market their

products at the same prices as those of imported materials, preference by the consumers is given to the latter. If preference is given to imported materials, it is because imported products are more durable, made to standard specifications and have better finish and appearance. We are therefore not in favour of restricted imports of products which are consumed mainly by those living on the land, by those working on the roads, permanent ways, canals, etc. It is only when foreign manufacturers make an attempt to market their products at uneconomic prices that we think control of imports should be considered and that too by protective duties. At the moment such conditions do not exist and we are not in favour of protecting the industry nor of restricting imports.

Chapter X—Export Possibilities

90. We were specifically asked to examine whether or not the industries with which we are concerned should cater for the export market and if so whether they should be developed on similar lines to those adopted in Japan. The rapid rise of Japan as an industrial power took place mainly during the two decades preceding World War II. The structure of Japanese industry was so built as to permit large modern industries to work alongside cottage and small scale industries. She so developed the technical details so far as the export market was concerned that the large and small industries worked as partners and not as competitors. In 1932, the last year for which a census was published 13 per cent of all registered workers were in small industries employing from 5 to 9 persons; 26 per cent were in workshops employing from 10 to 49 persons. 36 per cent were employed in medium size industries employing from 50 to 500 persons, leaving a bare 26 per cent for the large scale factories employing more than 500 workers. Thus 74 per cent of her industrial population was in small scale factories employing less than 500 persons and of these 39 per cent worked in factories employing less than 50 persons. Of the " miscellaneous industries " manufacturing export goods on an extensive scale which were a threat to world markets, only 12 per cent was produced in large scale; 52 per cent in medium scale and 36 per cent in small scale factories. A strikingly successful feature of this industrial structure was that the products of all these large, small and cottage scale factories had for export purposes a uniform standard for quality, packing, etc.

91. Various reasons have been advanced for such an industrial development in Japan. Chronic depression in agricultural occupations, coupled with imperfect factory legislation, permitting exploitation of the workers have been suggested as causes. Widespread hydro-electrification of the country, the use of water-wheel for motive power—which doubled during the last 20 years—were quoted as other reasons. The Japanese Government also assisted the industrial growth of the country by making available overland and overseas transport facilities as public utilities. They offered concessional rates for transport of raw materials to and from any part of the Japanese Empire. Any loss to the transport services was made good by subsidies, bounties and loans to the Japanese Shipping and Shipbuilding Industries and also to her railways. The formation of Co-operative Societies for industrial finance and the utilization of the world renowned " Zaibatsu " Organization of a dozen or so multi-millionaire industrial financing houses was also a feature of the Japanese Industrial growth.

92. We have in this country the nucleus of an industrial structure for the development of industries with which we are concerned more or less on the same lines as successfully adopted by Japan. In our opinion we can with certain modifications adopt Japanese structure to suit the peculiar needs of this

country. Bare subsistent wages and longer hours to work were undesirable features of the Japanese pre-war industrial machine. Under no circumstances can they be considered suitable for adoption in this country where the industrial planning is based on reasonable standard of living of the working class people.

93. But other features could be safely adopted and are already being planned, e.g. widespread hydro-electrification of the country, development of the small workshop, concessional rates for transport of raw materials, subsidies, bounties and loans for the shipping and shipbuilding industries or State participation in capital, growth of co-operative societies and utilization of large capitalists in this country for development of certain industries.

94. As far as the Steel Industries with which we are concerned, India has a great opportunity to sell their products in the markets of the British Empire in East Africa, Egypt, Palestine, Iraq, Persia and on the other side in Burma, the Strait Settlements, Java, Sumatra and in South China including Hong Kong. Undoubtedly our chief objective must be first to satisfy our own markets but we must also emphasize strongly the necessity of extending our markets in foreign countries because it forms an important basis of the post-war industrial planning. A large volume of machinery and capital equipment which we would require to raise the tempo of our industrial production, requires our having large surpluses of purchasing power in foreign countries. This could only be created by a favourable balance of trade wherein exports of manufactured goods particularly must create a balance of payment in favour of India. This can only be achieved by export of products of such industries in which India has a natural advantage in respect of the availability of raw materials and low cost of production. Two such industries are textile and steel though at the moment both of them are unable even to feed the internal market.

95. In 1934, the last year for which detailed statistics for exports from Japan are available, the British Empire in the Middle East, South East Asia and Australia imported 44·6 per cent of her total exports. The Dutch Empire imported 16 per cent; China imported 9 per cent; the U.S.A. 12·8 per cent and the rest of the world 17·6 per cent. If the tempo of production is increased, India can build up very profitably export markets with the countries of the British and Dutch Empire in the South East Asia and in the Middle East where 60 per cent of Japanese exports went. The reports submitted by our Trade Commissioners at the request of this Panel to the Industrial Adviser to the Government of India, indicated that all these markets are ready for absorbing India's products and in their opinion the time is now ripe for India to fill up the gaps created by the withdrawal from international trade of two of the commercially most powerful nations namely Japan and Germany. We therefore feel that it should be a cornerstone of Government's industrial policy to see that at least "general industrial merchandise" including products of the industries in the development of which we are concerned, are exported to these markets whenever opportunities occur.

96. We admit that as home markets are to be catered first, it will not be possible to freely export in the coming few years but during the interim period, we would advise the Government to carry out thorough investigations, through our Trade Commissioners in the markets east of Suez, about the type of products which consumers in those countries desire, their quality, price, etc., so that all the commercial information is readily available when the industries concerned are ready to enter the export market.

97. Plans should also be made to work out the most suitable marketing methods. Whether marketing should be left to the large merchant houses in the ports who have their branches in foreign lands or whether it should be left to individual firms or association of such firms, are matters which can only be

dealt with after industries are developed on well defined lines as indicated in this Report.

98. In the case of industries which are likely to develop on a small scale such as the manufacture of domestic hardware, cutleryware, surgical instruments, etc., we submit that the Directors of Industries in the various Provinces and States interested in their development should form a co-operative marketing organization or bring about an association of manufacturers who would themselves arrange for a marketing organization.

99. In our opinion no endeavour to establish market abroad would be successful if individual firms with very limited resources try and capture whatever trade they can. The reports from our Trade Commissioners already indicate that some such attempts have been made in the past with the result that many of the products of the Indian industries have gained a bad reputation or have been superseded by goods imported from other countries even at a higher price.

100. Standardization of production and the quality of the products are matters in which the departments concerned should actively interest themselves for the benefit of industries which are likely to be set up in the various Provinces and States.

101. To sum up there is a definite scope for the products of the industries with which we are concerned to enter markets east of Suez. In our opinion it is essential that India should take her proper place in the export markets of countries for which she is geographically best suited to supply her products. Some time must elapse before such a condition can arise and so, during the interim period, we advise the Government to explore all marketing possibilities.

102. We would also suggest that it would be of the greatest value if the Government of India in the Ministry of Industry and Supply invite the Directors of Industries of the various Provinces and States interested in the development of the Iron and Steel (Minor) Industries to formulate an all-India Plan for standardizing and marketing the products of these industries. We feel that until some general and fundamental conditions are agreed to by all the Provinces and States concerned, the possibilities of entering into export markets must be limited. Standardization of products and their marketing through proper channels are matters on which there should be no difference of opinion prevailing among the people who are interested in the development of these industries, whatever be their Province or State. It is only by such means that export possibilities can be converted into realities.

Appendices

103. Messrs. M. N. Rakhsit and H. Chiswell-Jones have submitted two separate brief notes on the present relations between employers and employees in Indian Industries and on employment of foreign capital. Shri Rakshit wanted us to write a separate chapter on the problems relating to Labour in the various industries dealt with in this Report. As the Ministry of Labour have been carefully examining labour conditions and as the matter is already receiving the attention of our National Government, we do not consider it necessary to do so. So the views which Shri Rakshit holds on the subject have been added as an Appendix " A " to the Report.

104. In regard to the employment of foreign capital, we are of the opinion that considering the small amount of capital required for the development of various industries discussed in this Report, it could easily be raised in this country and therefore indigenous capital should be employed hereafter. Our colleague Mr. Chiswell-Jones disagrees with us and states that what we believe

might "retard their economic progress". In support, he quotes one of the financial weeklies of Great Britain which suggested that " American Companies be encouraged not only to set up their own factories in Britain but be controlled by them". This according to him, is the realistic outlook on a Prblem often clouded by nationalistic ideals. In his opinion "co-operation not restriction should be the ideal, for by this means partnerships will be built up, which will endure and which cannot fail to bring increasing efficiency and prosperity to industry".

105. Mr. Chiswell-Jones has agreed with us on all the points on which we have tendered advice to the Government in this Report excepting the subject matter of the Appendix "B".

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